Check List **5**(1): 035–073, 2009.
ISSN: 1809-127X

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Summit vascular flora of Serra de São José, Minas Gerais, Brazil

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Abstract

The *campos rupestres* form a mosaic of rocky savannas concentrated mainly along the *Espinhaço* chain, on the Brazilian shield. Though the *Serra de São José* lies over 100 km to the south of the *Espinhaço* chain, the *campo rupestre* flora of this small range harbors several endemic plant taxa. The provided checklist is the result of two decades of floristic research complemented with data from herbaria and literature. The flora is compared with the results of several other pertinent surveys. A total of 1,144 vascular plant species, representing 50.3 species/km^2, were documented to date in the São José range, representing a species-richness per unit area over five times greater than other known *campo rupestre* floras. The most species-rich families were the Asteraceae (126 species), Orchidaceae (106), Melastomataceae (63), Leguminosae (60), Cyperaceae (45), Poaceae (41), Rubiaceae (37), Myrtaceae (28), Bromeliaceae (27), Eriocaulaceae (23), Lamiaceae (23), and Malpighiaceae (22).

Introduction

The *Serra de São José* (21°3-7' S, 44°6-13' W) is a small quartzite mountain range just northeast of the town of Tiradentes and west of Prados, state of Minas Gerais, Brazil (Figure 1). The local climate is characterized by rainy summer and arid winter, as exemplified the climate diagram from São João del Rey (6 km from the range, Figure 2). The range is recognized as an area of extreme importance for nature conservation within the state of Minas Gerais (PROBIO 2004). Apart from their relatively large species richness, the *campo rupestre* and forest biotas of the *Serra de São José* harbor many endemic and endangered species, and this fact alone justifies the range as a priority area for conservation at both the state and federal levels.

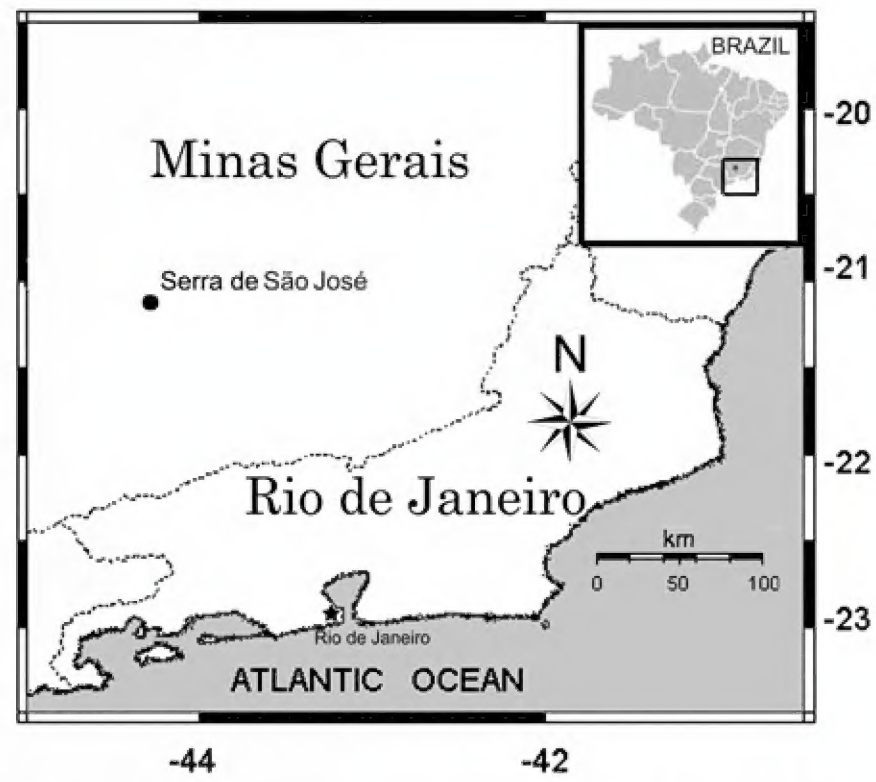

Figure 1. Location of the São José range in Minas Gerais and in Brazil.

Historically the *Serra de São José* range lay in the path of several field naturalists who travelled into the hinterland and collected botanical material on their expeditions in the late 18th and early 19th Centuries. Several plant names were dedicated to these collectors. *Langsdorffia hypogaea* and *Eugenia langsdorffii* were dedicated to Georg Heinrich von Langsdorff, who collected on the Serra de São José between 1774 and 1852.

Carl Friedrich Philippe von Martius collected in the *Serra de São José* during January of 1818, and his specimens are deposited in Vienna, St. Petesburg, London, Leiden, and Leipzig. Several species which occur in the range were described in Martius´ monumental *Flora Brasiliensis* and other works, for instance *Psittacanthus robustus*, *Barbacenia* (*Aylthonia*) *tomentosa*, and

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Jacaranda paucifoliata. Other botanists who collected in the *Serra de São José* according to the Flora Brasiliensis include Anders Fredrik Regnell (collection years: 1807–1884), Solomon Eberhard Henschen (collection years: 1877–1930), and Friedrich Sellow (collection years: 1818–1820), the latter of which was awarded with at least the following taxa, all of which occur in the Serra de São José: *Miconia sellowiana*, *Mandevilla sellowii*, *Anthurium sellowianum* and *Stachytarpheta sellowiana* (Figure 3). João Barbosa Rodrigues collected in the nearby Lenheiro range, only 6 km away, between 1842 and 1909, but it is not certain whether he collected in the *Serra de São José* as well. One of the founders of the Museu Nacional herbarium in Rio de Janeiro, Heinrich August Ludwig Riedel (collection years: 1790–1861), collected in the range between 1824 and 1825; *Gaylussacia riedelii* and *Rhynchospora riedeliana* were dedicated to him. Auguste François Marie Glaziou (collection years: 1833–1906) apparently collected in the range, but there are many erroneous and dubious data in collections atributed to him. The topotypic population of *Croton josephinus* (Figure 4) is restricted to the summit of the highest peak. The São José range is the type collection locality for several of the aforementioned species, plus, *Genlisea filiformis* and *Vellozia crinita*.

Figure 3. Topotypic specimen of *Stachytarpheta sellowiana* Schau. (Verbenaceae). Not collected. Photo: R. J. V. Alves

Figure 4. Topotypic specimen of *Croton josephinus* (Euphorbiaceae) rediscovered on and restricted to the summit of a single peak (1,430 m a.s.l.). RJV Alves 7289 (R). Photo: R. J. V. Alves

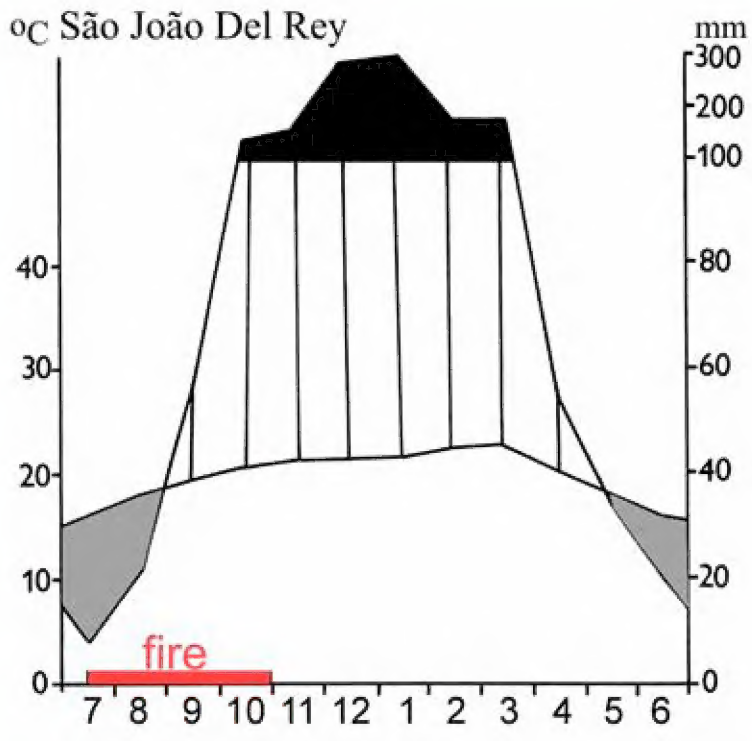

Figure 2. Climate diagram from the São João Del Rey station, only 6 km SW of the São José range. The most frequent period of savannic fires is also indicated.

At the end of the 19th Century, Astolpho Álvaro da Silveira, a very active field naturalist, visited and studied many mountain ranges of Minas Gerais. He wrote several books about various natural aspects of these mountains (for instance Silveira 1920; 1921; 1928; 1931), but all his writings are currently rare and very hard to find. Silveira was very interested in the Eriocaulaceae, a family which has its center of diversity in the campos rupestres – the main type of summit vegetation of the *Serra de São José*. Silveira´s official collection, including material from the Serra de São José (located numbers range from 149–1,257), was acquired by the herbarium of the *Museu Nacional* in Rio de Janeiro (R), but several of his specimens sporadically appear in other herbaria in Brazil and abroad.

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In the 20th Century, most collections in the *Serra de São José* were rather sporadic, on occasions when naturalists visited the historic towns of Tiradentes, Prados or São João del Rey. Two of these naturalists collected more intensely, but their findings were never systematized: In 1936 the visit of Henrique Lahmeyer de Mello Barreto rendered collections (4,765–5,090 are the numbers located so far), with one probably mistyped collection number: 17,537 from the same date as his number 5,090 (NY, RB). In the 1950s and 60s, Apparicio Pereira Duarte collected intensely in the Range and his material is in many herbaria including the NY, R and RB. His located collection numbers (2,5469,033) are mostly in R and there is even a very large number (34,971) which may be yet another mistyping. So far we were able to locate only 104 of his specimens from the range.

Our study area is indicated in Figure 1. In 1986, as a student, the first author undertook an almost accidental visit to the summit above Tiradentes and, in the following year, began two decades of relatively intense botanizing, especially in the species-rich campo rupestre and on the cliff walls of the range. One of the first long trips was accompanied by Marcos Valério Peron, at that time a promising Myrtaceae taxonomist, who numbered several of our collections (currently in RB). The first author began by studying the Orchidaceae of the range (Alves 1991a), was compelled to describe several new plant species (Alves 1990a; 1991b; 1992a) and ended up overwhelmed by the species richness in other plant groups. In 1989 Ruy J. V. Alves began his post graduate studies of the range under the guidance of the second author, Jiří Kolbek, at the Institute of Botany, former Czechoslovak Academy of Sciences.

Vellozia kolbekii (Figure 5) was probably a significant early contribution (Alves 1992a). Since then some taxa described from the Range were renamed. For instance *Pelexia phallocallosa* Alves was renamed *Pachygenium phallocalosum* (R.J.V. Alves) Szlach., R. González and Rutk. (Szlachetko et al. 2001), but Leslie Garay (pers. comm.) considered it a synonym of *P. orthosepala* (Rchb. f. and Warm.) Schltr. Others ended up as synonyms (*Sarcoglottis caudata* Alves = *S. simplex* (Griseb.) Schltr. (Stannard et al. 1995). After publishing the topotypic rediscovery of the endangered *Stachytarpheta sellowiana* Schau. in the Serra de São José (Atkins et al. 1996), we also found small populations in the Carrancas, Lenheiro and Ouro Branco ranges; at the time we did not know about the collection of Mello Barreto from 1936 (NY). For about a decade, the first author spent most of his time visiting the Range, mailing duplicates to specialists, and photographing over 5,000 slides (most of which are currently damaged by mold due to the humidity of Rio de Janeiro). However, there were unforgettable exceptions, exemplified by the kind treatment and keen sense of humor of Elsie Franklin Guimarães from the Rio Botanic Garden and Margarete Emmerich from the *Museu Nacional*: no matter how busy they were, they always put our plants under the binocular and accompanied us along the tortuous road towards determination.

Figure 5. Topotypic specimen of *Vellozia kolbekii* Alves (Velloziaceae), a species restricted to three *campo rupestre* ranges within a 50 km radius. Not collected. Photo: R. J. V. Alves

In 1996, when the first author assumed his current post at the Rio National Museum, collecting intensified slightly, because several students and a few colleagues accompanied some of the field trips and field courses of phytocoenology annually held in the *Serra de São José*. The exuberant diversity of the vegetation inspired some of these scholars to such an extent that they undertook formal studies in the Range: In 2001, Andréia

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Lúcia Pereira de Oliveira listed most of the Bromeliaceae from our collections in the Range as part of her Bachelor´s degree in Biology, and this listing was incorporated herein. Débora Medeiros concluded her MSc in 2002, listing the Euphorbiaceae from cerrado and campo rupestre of the range, which lead to the description of a curious new species of *Croton* with entirely glabrous leaves: *C. arlineae* (Medeiros et al. 2002). This also inspired the development of her doctoral thesis: a revision of the Sect. *Medea* of *Croton* (Medeiros 2007; Medeiros et al. 2008), during which two further new species were found. In her MSc. thesis in 2005, Rosana Augstroze Rutter Drummond listed 56 species of Melastomataceae (Drummond et al. 2007) from the range, which also resulted in the discovery of a new species of *Cambessedesia* (Figure 6) described with the valuable cooperation of Angela Borges Martins and named after the town of Tiradentes (Alves et al. 2008). This spectacular plant is known only from two tiny populations adding to, at the most, fifty individuals, and is probably narrowly endemic.

Figure 6. *Cambessedesia tiradentensis* Alves, Drummond & A. B. Martins (Melastomataceae), a new species named after the town of Tiradentes, is known only from two small *campo rupestre* populations in the São José range. The holotype is from this specimen. Photo: R. J. V. Alves.

The PhD thesis of the first author included a floristic checklist of the Serra de São José with 595 species including lichens, bryophytes and vascular plants. This was published in a limited series (Alves 1992). Since then, several other researchers have worked in the Range, and some of them published their results. This work is neither complete nor final. We have concentrated mainly on the *campo rupestre* vegetation on the range summits, the vascular flora of which can be expected to harbor between 1,200 and 1,400 species.

In the survey of forest tree species from the southern foot of the São José range, by Oliveira-Filho and Machado (1993), sampling was limited to individuals with a basal trunk diameter >= 5 cm (the material is in the ESAL herbarium). Analysing tree species with trunk diameter at breast height >5 cm in 18 evenly distributed belt transects totalling 0.9 ha, Gonzaga et al. (2008) found 130 species in the forests at the southern foot of the Serra de São José. Comparison of this partial flora with another 23 forest fragments in the region revealed affinities with forests of both higher and lower altitudes.

Gavilanes et al. (1995) listed 966 plant binomials belonging to 126 families for the *Serra de São José*, but collection numbers were not provided. In 2007, not even a single voucher specimen from the Range could be located in the PAMG/EPAMIG herbarium, where the material was mentioned to have been deposited. Furthermore the listing has some odd binomials: for instance among the ferns, *Anemia chlupata* and *A. striata*, which are coincident with codenames, written in Czech, from our field notebooks from September 1989 and accidentally printed in the PhD thesis of the first author. Our collections of these were determined later, respectively by Jefferson Prado and John T. Mickel, as *Anemia villosa* and *A. imbricata*.

In 1996 we guided Lea Scheinvar into the range in search of Cactaceae. The resulting collections in the RB herbarium should be viewed with caution: several species were collected in gardens in the town of Tiradentes and not in the Serra de São José as their tags indicate. The Cactaceae listed herein are exclusively from the range.

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Since the very beginning, our collections were intended to subsidize descriptions of vegetation and did not concentrate exclusively on Angiosperms. Hundreds of algal, moss, and lichen specimens were collected and sent to specialists. In 1990, when the lichen specimen Alves 1,118 (PRA) reached Teuvo Ahti in Helsinki, it turned out to be the second known collection of a new species, *Cladonia bahiana* Ahti, at the time still in press (Antonín Vězda, Czech Republic, personal comm.).

Lichenologists and bryologists from the Botanical Institute in São Paulo collected intensely in the range in 1993, but this expedition unfortunately never produced a lichen checklist. The actual lichen richness of the Range is considerable, and the few odd names we were able to compile make no justice to the actual lichen richness, and we list them herein with this *caveat*. Yano and Peralta (2008, in edit.) listed 114 Bryophyte species from the *Serra de São José*, including several new records for Brazil and for the state of Minas Gerais.

There were several other scientific studies directly inspired by the *Serra de São José* floristic and vegetation project. Valéria Cid Maia accompanied us on several field trips, and produced a survey of insect gall diversity from the range (Maia and Fernandes 2004).

Material and methods

The study area is a small range which consists of several mountains with elevations from 900 to 1,430 m a.s.l. and passes, aligned from SSW to NNE, being less than 2 km wide and roughly 15 km long. The top of the range and a large part of its flanks are covered by *campo rupestre* vegetation, occasionally interrupted by gallery forest and small pockets of latossol with *cerrado*. A roughly 1 km wide belt of dry *cerrado* forest runs along the southern foot of the range, while the northern side is flanked mostly by plantations in previously *cerrado* area. Mean annual temperatures measured in São João Del Rei (6 km from the western extremity of the range, at a similar mean altitude) vary from 14 to 26° C (with absolute temperatures reaching 36° C and 1° C respectively. Winter temperatures atop the range can reach below freezing point (minus 3° C was measured at 1250 m a.s.l. by Alves 1992) and frost is quite common. Rainfall averages during winter reach a minimum of 8 mm in July, while in the summer they can exceed 300 mm in January. Localized seasonal fires, both natural and provoked, are frequent in the area, and the summits are often grazed and trampled by cattle.

Our collections in the *Serra de São José* span two decades, and approximately half of the voucher specimens (collected prior to 1996) are deposited in the herbarium of the Rio de Janeiro Botanical Garden (RB). Subsequent collections are in the National Museum in Rio de Janeiro (R). In order to minimize impact on rare species such as several Orchidaceae, we only preserved flowers in alcohol for determination by floral analysis (Alves 1990b; c; 1998). Though our efforts were concentrated mainly on the summit rock-dwelling flora, about fifteen complementary collection excursions were also done in the forest at the southern foothills of the range, along its entire length.

Due to the intensity and frequency of changes in higher taxonomic ranks imposed by recent developments in systematics, we have chosen to list the vascular plants in alphabetical order by family, genus and species. As some families still do not have stable circumscriptions assigned by the Angiosperm Phyllogeny Group, we follow Cronquist (1988) for convenience of comparison to older floristic lists, and Rapini (2000) for joining the Asclepiadoideae under the Apocynaceae.

About half the determinations were provided by the specialists listed after each family. When several specialists are mentioned, they contributed at distinct times along the two decades. For a few of the specimens in the RB and foreign herbaria, we transcribed the determinations in institutional databases (JABOT 2008, Tropicos.org 2008, New York Botanical Virtual Herbarium 2008). The remaining determinations were done by comparison in herbaria, use of keys and published descriptions. The most recent names in the Tropicos.org (2008) database were adopted (for instance by Harold Robinson for the Asteraceae). For the nomenclature of *Drosera*, however, field observations and

cultivation have lead us to maintain the distinctions based on field observations of Saint Hilaire, disregarded by many latter authors. There are some cases, however, when the names in the Tropicos.org database are mistyped, or known synonyms are not referred to, and in these we did our best to use the original specific epithets. Apart from this checklist, detailed treatments of some taxonomic groups like the Droseraceae, Lentibulariaceae, Melastomataceae and Bryophytes from the range are currently being edited as chapters of a book by our colleagues. A detailed treatment of the Euphorbiaceae and Phyllanthaceae by Débora Medeiros had been accepted earlier by a journal, and is currently in print, hence only a simple checklist is provided herein. Though we concentrated on the summits, as we passed through the forested areas on our way up, we did collect sporadically, and we also registered peculiar vegetation on shaded quartzite boulders. The classification of life-forms follows the main subdivisions of Raunkiær (1934). For species which can develop more than one life form, only the predominant one was computed.

Distinct yet indetermined morphospecies within a given genus are marked as sp.1, sp.2 etc. Though we initially intended to provide all collection data, observations, determining specialists etc., the resulting list was 100 pages long. Hence the format of the current checklist is simplified, including only the names of taxa, a code for the predominant life form, and the first or the most representative specimen (collector and number, with herbarium acronyms after Holmgren et al. 1990). The current vascular flora was compared with floristic data from the *Serra do Cipó* (Giulietti et al. 1987) and Pico das Almas (Stannard et al. 1995), followed by the calculation of Sørensen similarity indices.

Results and Discussion

Current knowledge of species richness values also reflects collection effort, and their comparison is not always a simple matter. There are 3,200 collections in the database, with 1,258 species of vascular plants and bryophytes distributed over less than 25 km^2. Hence, the São José range has 50.3 species/km^2, while other much larger campo rupestre localities studied for comparable time periods rendered comparably poorer species richnesses per unit of area (Table 1). Of 1,144 vascular morphospecies, 957 are determined to or beyond species level (with 76 as "cf." or "aff."), and 181 are determined to genus (of which 9 are in "cf."). Even if all the taxa with uncertainties of infrafamilial determination were not computed (leaving 885 species and subspecies of vascular plants and 114 bryophytes), this would still result in an astonishing species richness of 35.4 species/km^2. Though the differences in Table 1 may partly be caused by distinct collection efforts, the *Serra de São José* still has a notoriously high species richness.

Table 1. Floristic composition, collection efforts and species richness in three *campo rupestre* localities with relatively complete surveys. Data sources: *Serra do Cipó,* northern Minas Gerais (Giulietti et al. 1987), *Pico das Almas*, Bahia (Stannard et al. 1995), *Serra de São José*, southern Minas Gerais (Bryophytes by Yano and Peralta, unpublished data, in edit.); the remainder is original data.

Locality	Serra do Cipó	Pico das Almas	Serra de São José
Area (km^2)	200	170	25
Bryophytes	19	65	114
Pteridophytes	39	51	54
Gymnosperms	2	1	3
Angiosperms	1,530	930	1,087
No. of species	1,590	1,044	1,258
Years collecting	19	21	20
No. of Collectors	>40	>40	15
Species/km^2	8.0	6.1	50.3

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The distinct selective method used in the forest by Oliveira-Filho and Machado (1993), along with the fact that we concentrated on campo rupestre, may partly explain why only 58 of their 277 species are also listed herein. Only 35 species in the present survey are also reported by Gonzaga et al. (2008). It is a rather curious fact that, in the higher parts of the studied forest where several transects were executed (especially near the southern wall above Tiradentes), several very common tree species such as *Clusia arrudea*, *Dyssochroma viridiflora, Maclura tinctoria*, *Myrciaria tenella, Podocarpus sellowii* were not sampled by the latter authors. We speculate that this may possibly be explained by limitations of using symmetrical distribution of sample plots. A systematic survey of all vascular species including herbs and shrubs in these same forests may easily lead to the discovery of several hundred species currently unregistered for the locality.

Though both aforementioned surveys are essentially from the same forest and used comparable selection criteria of trunk diameter, they have only 92 species in common, while respectively 185 and 38 exclusive species were sampled. Even when combined into one floristic matrix, both forest surveys are very dissimilar to the *campo rupestre* studied herein (Figure 7). Even if only the 210 *campo rupestre* tree species are considered, the resulting Sørensen similarity index is still only 0.262.

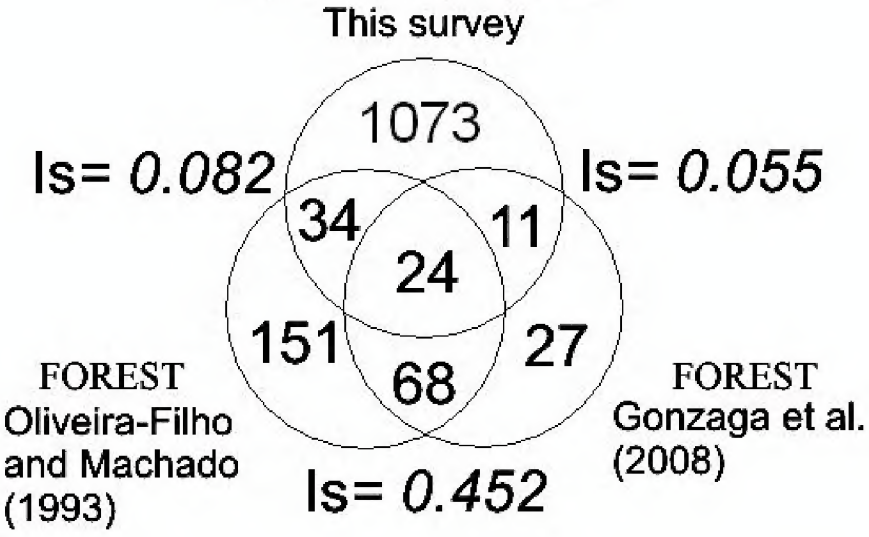

Figure 7. Comparison of the floristic surveys of the *Serra de São José campo rupestre* (top) and forest checklists by Oliveira-Filho and Machado (1993) and Gonzaga et al. (2008). Numbers represent species or varieties. Is = Sørensen similarity index.

Only 24 species registered herein are also common to the forest surveys by Oliveira Filho and Machado (1993) and Gonzaga et al. (2008): *Cabralea cangerana, Calophyllum brasiliense, Calyptranthes clusiifolia, Clusia criuva, Copaifera langsdorffii, Croton floribundus, Cupania vernalis, Eremanthus erythropappus, E. incanus, Hedyosmum brasiliense, Lithraea molleoides, Machaerium nyctitans, M. villosum, Miconia cinnamomifolia, Myrsine coriacea, M. umbellata, Protium brasiliense, P. heptaphyllum, Roupala montana, Rudgea viburnoides, Schinus terebenthifolius, Talauma ovata, Tibouchina stenocarpa,* and *Vitex polygama*.

Two relatively large *campo rupestre* floras were compared with the checklist herein: the *Serra do Cipó* (Giulietti et al. 1987) and *Pico das Almas* (Stannard et al. 1995). As expected, the Sørensen similarity index is slightly lower between the farthest localities (Figure 8).

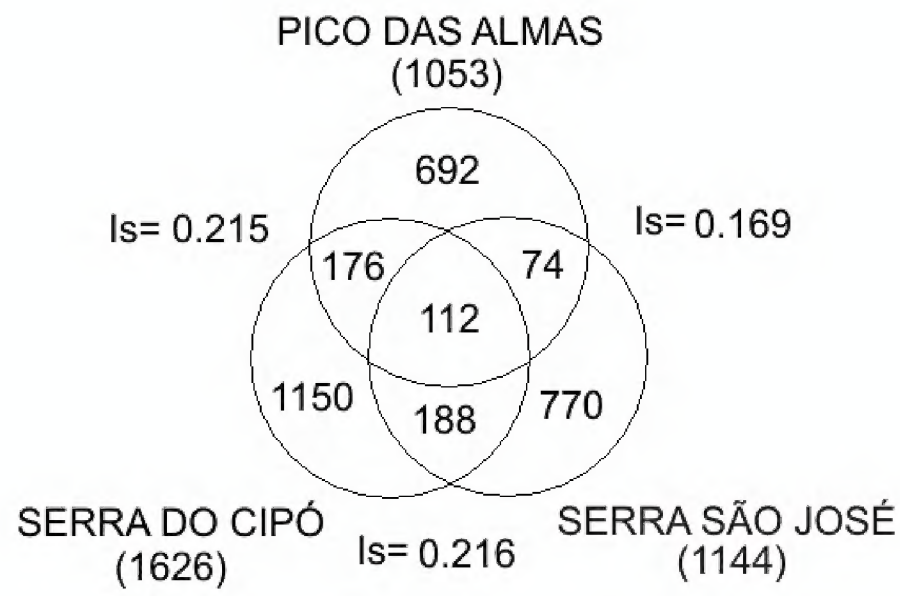

Figure 8. Comparison of the vascular floras of the *Pico das Almas* in Bahia (Stannard et al. 1995), *Serra do Cipó*, northern Minas Gerais (Giulietti et al. 1987) and the *Serra de São José*. Numbers represent species or varieties. Is = Sørensen similarity index.

Despite the extrazonal nature and small areas occupied by outcrop vegetation in general, the species richness of *campo rupestre* floras seems to follow the first and second biocoenotic principles of Thienemann (1920; 1954): "the more variable the habitat conditions, the higher the diversity in a biocoenosis" and "in a community very rich in species, the incidence of the different species is

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usually low, whereas in a community poor in species, the single members often occur in large numbers, such a community or biocoenose being less stable than the former." (Klötzli 1992).

Amidst the current shiftings of entire groups of species from one genus to another (Alves and Vianna Filho 2007), there seems to be no taxonomic consensus in sight (examples are the *Acianthera-Pleurothallis-Specklinia* and the *Hadrolaelia – Hoffmannseggella – Laelia - Sophronitis* complexes among the Orchidaceae).

The presence of lithophytes and a higher proportion of epiphytes apparently distinguish *campo rupestre* from surrounding zonal vegetation. Phanerophytes make up 40.3 % of the vascular flora of the São José range, followed by chamaephytes and hemicryptophytes (Figure 9). Among the phanerophytes, we registered 210 species of trees and tall shrubs (18.5 % of the summit flora).

The hydrophytes have not been systematically collected. Of 446 woody species in the flora, 291 species are trees or tall shrubs and 155 are subshrubs. Thickened underground organs such as bulbs, corms, rhizomes, tubers, lignotubers and tuberous roots were found in 446 species belonging to 59 families of the São José range flora. These organs are important adaptations to natural fires. Because not every species encountered in the range was uprooted, the real percentage is probably even higher. The largest numbers of subterranean organs were found among the Asteraceae (94 species), Melastomataceae and Leguminosae (each with 33), Orchidaceae (30), Apocynaceae (including Asclepiadoideae, with 26), Lamiaceae (21), Malpighiaceae (16), Euphorbiaceae (15), and Rubiacae (13).

As the surrounding savannas, the *campo rupestre* vegetation is also well adapted to natural disturbances by fire, though the ideal periodicity still remains to be established. The most serious issue in "*campo rupestre*" is the presence of grazing cattle, which fertilize originally oligotrophic soils, and allow the establishment of invasive plant species. Among these, the molasses-grass (*Melinis minutiflora* P. Beauv.) is apparently of most concern, since it promotes the spread of fire to areas previously free from it. As the "*campo rupestre*" in the São José range (and probably many other areas with similar rock-dwelling vegetation) exhibit unprecedented species-richness and occupy extremely reduced geographical areas, the exclusion/removal of grazing domestic animals from these is the most urgent and imperative conservation measure.

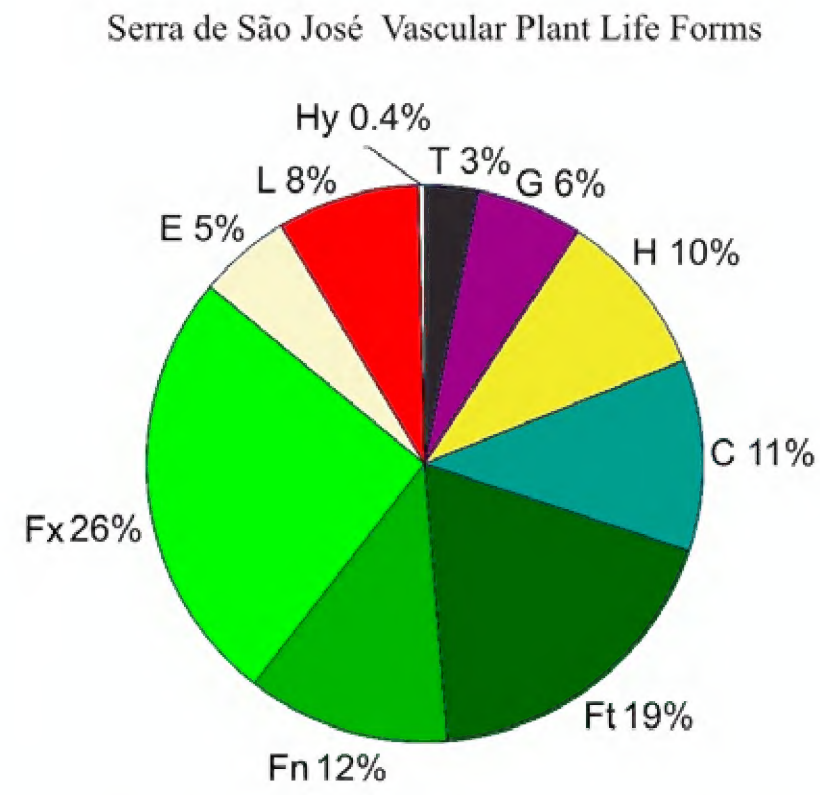

Figure 9. Floristic life-form spectrum following Raunkiær (1934) of the vascular flora of the São José range. **T** - therophytes; **G** - geophytes; **H** - hemicryptophytes; **C** - chamaephytes; **F** - phanerophytes (**Ft** - trees and large shrubs; **Fn** - nanophanerophytes without lignotubers; **Fx** - nanophanerophytes or climbers with verified lignotubers); **E** - epiphytes; **L** - lithophytes; **Hy** - Hydrophytes. For species which can develop more than one life form, only the predominant one was computed.

Acknowledgements
We are most indebted to Pedro Sérgio Fernandes (Aluarte, Tiradentes), to José Nivaldo de Menezes Machado (IBAMA, Ritápolis), Karin von Smigay (*Pousada d´óleo* de Guignard, Tiradentes) and the late Marcelo Duarte (Secretary of the

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Environment, Tiradentes) for their frequent logistic support to our expeditions. This checklist was only possible due to the contributions, comments and determinations of approximately one hundred people and institutions, support by local people and enterprises. Special thanks are due to many taxonomic specialists cited as collaborators in Appendix 1, and to Antonín Vězda (PRA, Lichenes), Jiří Váňa (PRC, Bryopsida and Hepaticopsida), Marcelo Marcelli (SP, Lichenes), Mariângela Menezes (R, Algae and Cyanobacteria), Olga Yano (SP, Bryopsida and Hepaticopsida), Renato Rodrigues Cabral Ramos (*Museu Nacional*, Geology) and Teuvo Ahti (H, Lichenes) for suggestions and valuable comments, Ivana Rajznoverová for technical assistance with the manuscript, the *Instituto Estadual de Florestas* (IEF/MG), especially Ana Paula Pinheiro and Janaína Aguiar, and the *Floresta Nacional de Ritápolis* (FLONA/IBAMA) for occasional logistic support in the field. This project was partly supported and authorized by the *Instituto Estadual de Florestas*. The participation of the second author was possible due to Czech research project number AVOZ 60050516. The scholarships (1988–1996) from the Brazilian Council of Research (CNPq) were also essential to these accomplishments. A notable Brazilian collaborator was Wanderbilt Duarte de Barros, who became a close friend while he presided the Brazilian Foundation for the Conservation of Nature (FBCN), and who, as Director of the Rio Botanical Garden, helped the present Flora effort immensely by inviting the first author to work as a visiting researcher after having concluded his PhD studies in Prague, Czech Republic. Thanks to his support it was possible to compare many collected species in the RB herbarium.

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Received August 2008
Accepted January 2009
Published online March 2009

Appendix 1. Floristic checklist of the Serra de São José, updated to June 2008. Life forms (♣) following Raunkiær (1934) are designated as: **T** = therophytes; **G** = geophytes; **H** = hemicryptophytes; **C** = chamaephytes; **F** = phanerophytes (**Ft** = trees and large shrubs; **Fn** = nanophanerophytes without lignotubers; **Fx** = nanophanerophytes with verified lignotubers); **V** = Vines/Climbers (**Vx** = Vines with verified lignotubers); **E** = epiphytes; **L** = lithophytes; **Hy** = Hydrophytes. ▲ = accession data for a single selected specimen, consisting of collector, number and herbarium acronym. In order to conserve natural populations, only flowers were collected for determination in most orchids, and these liquid-preserved collections are marked with an asterisk (*).Collaborators and their respective herbarium acronyms or Institutions are listed after each family or group.

Pteridophyta

Collaborators: Fabiana Nonato (R), Jefferson Prado (SP), John T. Mickel (NY), Paulo Günther Windisch (HSJRP).

Adiantaceae

Adiantopsis radiata (L.) Fee; ♣**C** ▲ Alves RJV 1318 (R)

Adiantum pedatum L.; ♣**C** ▲ Alves RJV 170 (R)

Adiantum cf. *pentadactylon* Langsd. & Fisch.; ♣**C** ▲ Alves RJV 6285 (R)

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Adiantum sp;. ♣**C** ▲ Alves RJV 713 (R)
Aspleniaceae
Asplenium cf. *auritum* Sw. ♣**C** ▲ Alves RJV 6286 (R)
Asplenium cf. *claussenii* Hieron. ♣**C** ▲ Alves RJV 6287 (R)
Asplenium formosum Willd. ♣**C** ▲ Alves RJV 6057 (R)
Asplenium sp. ♣**H** ▲ Alves RJV 6283 (R)

Blechnaceae
Blechnum brasiliense Desv. ♣**F** ▲ Alves RJV 6056 (R)
Blechnum glandulosum Kaulf. ex Link ♣**F** ▲ Alves RJV 150 (R)
Blechnum aff. *glandulosum* Kaulf. ex Link ♣**F** ▲ Alves RJV 6217 (R)
Blechnum sp. ♣**F** ▲ Alves RJV 6068 (R)

Cyatheaceae
Cyathea delgadii Sternb. ♣**F** ▲ Alves RJV 55 (R)
Alsophila setosa Kaulf. ♣**F** ▲ Alves RJV (R)

Dennstaedtiaceae
Lindsaea cf. *stricta* (Sw.) Dry. ex Sm. ♣**C** ▲ Alves RJV 6350 (R)
Pteridium aquilinum (L.) Kuhn ♣**G** ▲ Alves RJV 6127 (R)

Equisetaceae
Equisetum giganteum L. ♣**H** ▲ Alves RJV 6284 (R)
Equisetum sp. ♣**H** ▲ Alves RJV 5651 (R)

Gleicheniaceae
Dicranopteris flexuosa (Schrad.) Underw. ♣**G** ▲ Alves RJV 6055 (R)
Gleichenia bifida (Willd.) Spreng. ♣**G** ▲ Alves RJV 396 (R)

Grammitidaceae
Grammitis serrulata (Sw.) Sw. ♣**L** ▲ Alves RJV 28 (R, SP)

Hymenophyllaceae
Hymenophyllum plumosum Kaulf. ♣**L** ▲ Duarte AP 4273 (RB)
Trichomanes pilosum Raddi ♣**L** ▲ Alves RJV 705 (R, SP)
Trichomanes sp. ♣**L** ▲ Alves RJV 6137 (R)

Lomariopsidaceae
Elaphoglossum cf. *macahense* (Fee) Rosenstock ♣**L** ▲ Alves RJV 753 (R)
Elaphoglossum sp. ♣**L** ▲ Alves RJV 1315 (R)

Lycopodiaceae
Lycopodiella alopecuroides (L.) Cranfill ♣**C** ▲ Alves RJV 73 (R)
Lycopodiella camporum B. Øllg. & P. G. Windisch ♣**C** ▲ Alves RJV 307 (R)
Lycopodiella cernua (L.) L. ♣**C** ▲ Alves RJV 553 (R)

Ophioglossaceae
Ophioglossum pedunculosum Desv. ♣**G** ▲ Alves RJV 201 (R, SP)

Polypodiaceae
Campyloneurum angustifolium (Sw.) Fée ♣**L** ▲ Alves RJV 397 (R)

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Microgramma squamulosa (Kaulf.) de la Sota ♣**E** ▲ Alves RJV s.n. (R)
Microgramma sp. ♣**E** ▲ Alves RJV 6066 (R)
Phlebodium cf. *pseudoaureum* (Cav.) Lellinger ♣**E** ▲ Alves RJV 6067 (R)
Pleopeltis angusta Humb. & Bonpl. ex Willd. ♣**E** ▲ Alves RJV s.n. (R)
Polypodium hirsutissimum Raddi ♣**E** ▲ Alves RJV 6065 (R)
Polypodium lepidopteris (Langsd. & Fisch) Kunze ♣**E** ▲ Alves RJV 704 (R, SP)
Polypodium sp. ♣C ▲ Alves RJV 6131 (R)

Pteridaceae
Doryopteris ornithopus (Mett.) J. Smith ♣**H** ▲ Alves RJV 4873 (R)
Doryopteris pedata Kunth ssp. *palmata* (Willd.) Hassl. ♣**H** ▲ Alves RJV 1316 (R)
Notholaena venusta Brade ♣**E** ▲ Alves RJV 707 (R)
Pellaea microphylla (L.) Lindl. ♣**H** ▲ Alves RJV 1142 (R)
Pteris cf. *denticulata* Sw. ♣**L** ▲ Alves RJV 6159 (R)
Pteris sp. ♣**L** ▲ Alves RJV 6278 (R)

Schizaeaceae
Anemia elegans (Gardner) C. Presl ♣**L** ▲ Alves RJV 157 (R)
Anemia cf. *ferruginea* Kunth ♣**H** ▲ Alves RJV 6059 (R)
Anemia oblongifolia (Cav.) Sw. ♣**L** ▲ Alves RJV 199 (R)
Anemia villosa Humb. & Bonpl. ex Willd. ♣**L** ▲ Alves RJV 610 (R, SP)
Anemia sp. ♣**L** ▲ Alves RJV 715 (R)

Selaginellaceae
Selaginella fragilima Alv. Silv. ♣**C** ▲ Silveira AA da 149 (R)
Selaginella marginata (Humb. & Bonpl. ex Willd.) Spring ♣**C** ▲ Alves RJV 1123 (R)
Selaginella sp. ♣**C** ▲ Alves RJV 6062 (R)

Thelypteridaceae
Thelypteris sp. ♣**L** ▲ Alves RJV 6129 (R)

Vittariaceae
Vittaria lineata (L.) Sw. ♣**E** ▲ Alves RJV 4773 (R)

Pinophyta

Araucariaceae
Araucaria angustifolia (Bertol.) Kuntze ♣**Ft** ▲ Alves RJV s.n. (R)

Podocarpaceae
Podocarpus lambertii Klotzsch ex Endl. ♣**Ft** ▲ Alves RJV 802 (R)
Podocarpus sellowii Klotzsch ex Endl. ♣**Ft** ▲ Alves RJV s.n. (RB)

Magnoliophyta

Acanthaceae
Jacobinia aff. *sellowiana* Hieron. ♣**Fx** ▲ Vianna MC 2373 (GUA)
Justicia riparia C. Kameyama ♣**Fx** ▲ Alves RJV 985 (R)
Justicia sp. ♣**Fx** ▲ Peron MV 301 (RB)
Ruellia brevifolia (Pohl) C. Ezcurra ♣**C** ▲ Alves RJV 286 (RB)
Ruellia formosa Andrews ♣**C** ▲ Duarte AP 3495 (RB)

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Ruellia geminiflora Kunth ♣**C** ▲ Alves RJV 6 (R)
Ruellia sp. ♣**C** ▲ Alves RJV 482 (RB)
Teliostachya sp. ♣**Fx** ▲ Alves RJV 5326 (R)

Alismataceae
Echinodorus tenellus (Mart.) Buch. var. *tenellus* ♣**Hy** ▲ Alves RJV 5873 (R)
Echinodorus sp. ♣**Hy** ▲ Alves RJV 4912 (R)

Alstroemeriaceae
Collaborator: Marta Camargo de Assis (UEC)
Alstroemeria stenopetala Schenk. ♣**G** ▲ Alves RJV 978 (R)
Alstroemeria sp. ♣**G** ▲ Alves RJV 189 (R)
Bomarea edulis Suess. ♣**G** ▲ Alves RJV 5809 (R)

Amaranthaceae
Collaborator: Josafá Carlos da Siqueira (FCAB).
Alternanthera paronychioides A. St.-Hil. ♣**X** ▲ Alves RJV 5657 (R)
Amaranthus hybridus L. ♣C ▲ Alves RJV 1144 (R)
Amaranthus sp. ♣C ▲ Alves RJV 4372 (R)
Gomphrena agrestis Mart. ♣**X** ▲ Alves RJV 327 (R)
Gomphrena arborescens L. f. ♣**X** ▲ Alves RJV 311 (R)
Gomphrena velutina Moq. ♣**X** ▲ Alves RJV 123 (RB)
Gomphrena virgata Mart. ♣**X** ▲ Alves RJV (R)
Pfaffia helichrysoides (Mart.) Kuntze ♣**X** ▲ Alves RJV 327.2 (R)
Pfaffia jubata Mart. ♣**X** ▲ Alves RJV 965 (R)
Pfaffia velutina Mart. ♣**X** ▲ Alves RJV 5932 (R)

Amaryllidaceae
Collaborator: Julie Henriette Antoinette Dutilh (UEC).
Habranthus irwinianus Rav. ♣**G** ▲ Alves RJV 5906 (R)
Habranthus sylvaticus (Mart. ex Schult.) Herb. ♣**G** ▲ Alves RJV 979 (R)
Hippeastrum morelianum Lem. ♣**G** ▲ Alves RJV (R)
Hippeastrum sp. ♣**G** ▲ Alves RJV 1309 (R)

Anacardiaceae
Lithraea molleoides (Vell.) Engl. ♣**F** ▲ Alves RJV (RB)
Schinus terebenthifolius Raddi ♣**F** ▲ Alves RJV s.n. (R)
Schinus sp. ♣**F** ▲ Alves RJV s.n. (R)

Annonaceae
Annona crassiflora Mart. ♣**F** ▲ Alves RJV 886 (R)
Annona tomentosa R. E. Fries ♣**F** ▲ Alves RJV 874 (R)
Annona sp. ♣**F** ▲ Alves RJV 5853 (R)
Rollinia emarginata Schltdl. ♣**F** ▲ Duarte AP 3512 (RB)
Rollinia sp. ♣**F** ▲ Alves RJV 5967 (R)

Apiaceae
Eryngium canaliculatum Cham. & Schltdl. ♣**C** ▲ Alves RJV 4443.2 (R)
Eryngium ebracteatum Lam. ♣**C** ▲ Duarte AP 4091 (RB)
Eryngium horridum Malme ♣**C** ▲ Duarte AP 3490 (RB)
Eryngium juncifolium (Urban) Math. & Const. ♣**C** ▲ Alves RJV 4443.3 (R)

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Eryngium paniculatum Cav. ♣**C** ▲ Alves RJV 42 (R)
Eryngium pristis Cham. ♣**C** ▲ Alves RJV 87 (R)
Eryngium sp. ♣**C** ▲ Alves RJV 831 (R)
Hydrocotyle quinqueloba Ruiz & Pavon ♣**G** ▲ Alves RJV 4018 (R)
Hydrocotyle sp. ♣**C** ▲ Alves RJV 1096 (R)
Klotzschia brasiliensis Cham. ♣**C** ▲ Alves RJV 358 (R)
Spananthe paniculata H. Wolff ♣**C** ▲ Duarte AP 5118 (RB)

Apocynaceae – Apocynoideae
Collaborators: Jorge Fontella Pereira (RB, later R), Luciene Bernardo Santos (R), Miriam Cristina Alvarez Pereira (HB).
Aspidosperma ramiflorum Müll. Arg. ♣**Fx** ▲ Alves RJV 5302 (R)
Aspidosperma sp. ♣**Fx** ▲ Alves RJV 5870 (R)
Dipladenia polymorpha Müll. Arg. ♣**Fx** ▲ Alves RJV 775 (R)
Macrosiphonia longiflora (Desf.) Muell. Arg. ♣**Fx** ▲ Alves RJV 5948 (R)
Mandevilla atroviolacea (Stadelm.) Woodson ♣**Vx** ▲ Alves RJV 4350 (RB)
Mandevilla hirsuta (Rich.) K. Schum. ♣**Fx** ▲ Duarte AP 4062 (RB)
Mandevilla cf. *moricandiana* (A. DC.) Woodson ♣**Vx** ▲ Alves RJV 823 (R)
Mandevilla rugosa (Benth.) Woodson ♣**Fx** ▲ Alves RJV (R)
Mandevilla aff. *selowii* (Müll. Arg.) Woodson ♣**Fx** ▲ Alves RJV 823 (R)
Mandevilla tenuifolia (Mikan) Woodson ♣**Fx** ▲ Alves RJV 775 (R)
Mandevilla aff. *velutina* (Mart.) Woodson ♣**Fx** ▲ Alves RJV 888.1 (R)
Mandevilla sp. ♣**Fx** ▲ Alves RJV 889 (R)
Rhabdadenia cf. *pohlii* Müll. Arg. ♣**Fx** ▲ Alves RJV 888.2 (R)
Rhodocalyx rotundifolius Müll. Arg. ♣**Fx** ▲ Alves RJV 4322 (R)

Apocynaceae – Asclepiadoideae
Collaborator: Jorge Fontella Pereira (RB, later R).
Asclepias curassavica L. ♣**C** ▲ Alves RJV 5316 (R)
Barjonia erecta (Vell.) Schum. ♣**Fn** ▲ Alves RJV 5652 (R)
Ditassa cordata (Turcz.) Fontella var. *abortiva* (E. Fourn.) Fontella ♣**Fx** ▲ Alves RJV 4353 (RB)
Ditassa decussata Mart. ♣**Fx** ▲ Alves RJV 751 (RB)
Ditassa lenheirensis Silveira ♣**Fx** ▲ Alves RJV 6982 (R)
Ditassa retusa Mart. ♣**Fx** ▲ Martinelli G 4785 (RB)
Ditassa succedanea Rapini ♣**Fx** ▲ Alves RJV 725 (RB)
Ditassa sp. ♣**Fx** ▲ Alves RJV 724 (R)
Gonolobus selloanus (E. Fourn.) Bacigalupo ♣**L** ▲ Alves RJV 5303 (R)
Gonolobus aff. *selloanus* (E. Fourn.) Bacigalupo ♣**Fx** ▲ Alves RJV 4982 (R)
Macroditassa adnata (E. Fourn.) Malme ♣**Fx** ▲ Marquete N 588 (RB)
Metastelma erectum Alv. Silv. ♣**Fx** ▲ Silveira AA da 291 (R)
Oxypetalum appendiculatum Mart. ♣**Fx** ▲ Alves RJV 841 (R, RB)
Oxypetalum banksii Schult. ssp. *corymbiferum* (E. Fourn.) Fontella & C. Valente ♣**C** ▲ Alves RJV 760 (RB)
Oxypetalum strictum Mart. ♣**C** ▲ Alves RJV 6972 (R)
Oxypetalum sp. ♣**C** ▲ Alves RJV 4809 (R)
Tassadia subulata Fontella & E. A. Schwarz var. *florida* (Vell.) Fontella & E. A. Schwarz ♣**Fx** ▲ Rutter RA 157 (R)
Tassadia sp. ♣**E** ▲ Alves RJV 4716 (R)

Aquifoliaceae
Ilex amara (Vell.) Loes. ♣**Fn** ▲ Alves RJV 981 (R)

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Ilex integerrima Reissek ♣**Fn** ▲ Alves RJV 814 (R)
Ilex vitis-idaea Loes. ♣**Fn** ▲ Duarte AP 3489 (RB)
Ilex sp. ♣**Fn** ▲ Peron MV 300 (RB)

Araceae
Anthurium minarum Sakuragui & Mayo ♣**E** ▲ Alves RJV 27 (R)
Philodendron biribiriense Sakuragui & Mayo ♣**L** ▲ Alves RJV 1322 (RB)
Philodendron cipoense Sakuragui & Mayo ♣**L** ▲ Alves RJV 1016 (R)
Philodendron minarum Engl. ♣**L** ▲ Alves RJV 4354 (RB)
Philodendron sonderianum Schott ♣**L** ▲ Alves RJV 4426 (RB)
Philodendron speciosum Schott ♣**L** ▲ Duarte AP 3469 (RB)
Philodendron uliginosum Mayo ♣**L** ▲ Sakuragui CM (RB)
Philodendron sp. ♣**L** ▲ Alves RJV 847 (R)

Araliaceae
Didymopanax sp. ♣**F** ▲ Alves RJV s.n. (R)

Arecaceae
Allagoptera campestris (Mart.) O. Kuntze ♣**Fx** ▲ Alves RJV 811 (R)
Geonoma sp. ♣**F** ▲ Alves RJV 5396 (R)

Aristolochiaceae
Aristolochia claussenii Duchartre ♣**Vx** ▲ Alves RJV 993 (R)
Aristolochia gracilis Duchartre ♣**Fx** ▲ Alves RJV 217 (R)
Aristolochia smilacina Duchartre ♣**Fx** ▲ Duarte AP 3511 (RB)
Aristolochia sp. ♣**Vx** ▲ Marquete R 3949 (RB)

Asteraceae
Collaborators: Harold Robinson (US), João Semir (UEC), John Pruski (NY), Roberto Lourenço Esteves (HRJ).
Achyrocline alata (Kunth) DC. ♣**Fx** ▲ Alves RJV 288 (RB)
Achyrocline albicans Griseb. ♣**Fx** ▲ Alves RJV 377 (RB)
Achyrocline satureioides DC. ♣**Fx** ▲ Alves RJV 121 (RB)
Actinoseris amplexifolia (Gardner) Roque ♣**F** ▲ Alves RJV 5470 (R)
Actinoseris arenaria (Baker) Roque ♣**Fx** ▲ Alves RJV 863 (R)
Ageratum conyzoides L. ♣**T** ▲ Alves RJV 1021 (R)
Ageratum fastigiatum (Gardner) R. M. King & H. Rob. ♣**T** ▲ Alves RJV 276 (RB)
Ageratum sp. ♣**T** ▲ Alves RJV 590 (R)
Aspilia duarteana Santos ♣**T** ▲ Duarte AP 3521 (RB)
Aspilia foliacea Baker ♣**Fx** ▲ Alves RJV 31 (R)
Aspilia aff. *foliacea* Baker ♣**Fx** ▲ Alves RJV 907 (R)
Aspilia jugata H. Rob. ♣**Fx** ▲ Alves RJV 1020 (R)
Aspilia reflexa Baker ♣**Fx** ▲ Duarte AP 4295 (RB)
Aspilia riedelii Baker ♣**Fx** ▲ Alves RJV 4029 (R)
Aspilia sp. ♣**Fx** ▲ Alves RJV 898 (R)
Austrocritonia velutina (Gardner) K. & R. ♣**F** ▲ Alves RJV 1035 (R)
Ayapana amygdalina (Lam.) R. M. King & H. Rob. ♣**F** ▲ Alves RJV 1359 (R)
Baccharis aphylla (Vell.) DC. ♣**Fx** ▲ Alves RJV 33 (RB)
Baccharis calvescens DC. ♣**Fx** ▲ Alves RJV 370 (R)
Baccharis dracunculifolia DC. ♣**F** ▲ Alves RJV 4032 (R)
Baccharis leptocephala DC. ♣**F** ▲ Alves RJV 1352 (R)

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Baccharis myricifolia DC. ♣**Fx** ▲ Alves RJV 4032 (RB)
Baccharis platypoda DC. ♣**Fx** ▲ Alves RJV 1633 (R)
Baccharis serrulata (Lam.) Pers. ♣**Fx** ▲ Alves RJV 788 (R)
Baccharis sessiliflora Vahl ♣**F** ▲ Alves RJV 372 (RB)
Baccharis tarchonanthoides Baker ♣**F** ▲ Duarte AP 4077 (RB)
Baccharis trimera (Less.) DC. ♣**C** ▲ Alves RJV 57 (R)
Baccharis sp. ♣**C** ▲ Alves RJV 1019 (R)
Bidens pilosus L. ♣**T** ▲ Alves RJV 5317 (R)
Calea clausseniana Baker ♣**F** ▲ Peron MV 349 (RB)
Campuloclinium decumbens (Gardner) Schult. Bip. ex Baker ♣**Fx** ▲ Alves RJV (R)
Campuloclinium megacephalum R. M. King & H. Rob. ♣**Fx** ▲ Raposo CAM 170 (R)
Chaptalia integerrima (Vell.) Burk. ♣**Fx** ▲ Alves RJV 1022 (R)
Chaptalia nutans (L.) Polak ♣**Fx** ▲ Alves RJV 1023 (R)
Chaptalia runcinata Kunth ♣**Fx** ▲ Alves RJV 52 (R)
Chresta pinnatifida (Philipson) H. Rob. ♣**Fx** ▲ Alves RJV 905.1 (R)
Chresta scapigera (Less.) Gardner ♣**Fx** ▲ Alves RJV 180 (R)
Chresta aff. *scapigera* (Less.) Gardner ♣**Fx** ▲ Vianna MC Serra de São José 112 (GUA)
Chromolaena barbacensis (Hieron.) R. M. King & H. Rob. ♣**F** ▲ Alves RJV 4030 (RB)
Chromolaena odorata (Koster f.) Sunita Garg ♣**F** ▲ Alves RJV 376 (RB)
Chromolaena pungens (Gardner) R. M. King & H. Rob. ♣**F** ▲ Alves RJV 374 (RB)
Chromolaena stachyophylla (Sprengel) R. M. King & H. Rob. ♣**F** ▲ Alves RJV 913 (R)
Cyrtocymura scorpioides (Lam.) H. Rob. ♣**Fx** ▲ Alves RJV 5159 (R)
Dasyphyllum brasiliense (Spreng.) Cabrera ♣**F** ▲ Alves RJV 372 (RB)
Dasyphyllum macrocephala (Bak.) Cabrera ♣**F** ▲ Alves RJV 371 (RB)
Dasyphyllum regnelianum (Gardner) Cabrera ♣**F** ▲ Alves RJV 5354 (R)
Dasyphyllum sprengelianum (Gardner) Cabrera ♣**F** ▲ Alves RJV 5354 (R)
Dasyphyllum sp. ♣**F** ▲ Alves RJV 1026 (R)
Echinocoryne pungens (Gardner) H. Rob. ♣**Fx** ▲ Alves RJV 5251 (R)
Echinocoryne schwenkiifolia (Mart. ex DC.) H. Rob. ♣**Fx** ▲ Alves RJV 560 (RB)
Eclipta prostrata (L.) L. ♣**T** ▲ Alves RJV 1140 (R)
Elephantopus angustifolius Swartz ♣**F** ▲ Alves RJV 931 (R)
Elephantopus mollis Kunth ♣**F** ▲ Alves RJV 1025 (R)
Elephantopus riparius Gardner ♣**F** ▲ Kinoshita-Gouvêa LS (RB)
Emilia sonchifolia DC. ♣**T** ▲ Alves RJV 570 (R)
Eremanthus crotonoides (DC.) Schult. Bip. ♣**F** ▲ Alves RJV 623 (RB)
Eremanthus erythropappus (DC.) McLeisch ♣**F** ▲ Alves RJV 54 (R)
Eremanthus incanus (Less.) Less. ♣**Fx** ▲ Martinelli G 4778 (RB)
Eremanthus speciosus (Gardner) Baker ♣**Fx** ▲ Alves RJV 375 (R)
Erigeron maximus Link & Otto ♣**T** ▲ Alves RJV 479 (R)
Ethulia conyzoides L. ♣**T** ▲ Alves RJV 4360 (RB)
Eupatorium adenanthum DC. ♣**F** ▲ Alves RJV 376 (R)
Eupatorium dictyophyllum DC. ♣**F** ▲ Alves RJV 774 (R)
Eupatorium horminoides (DC.) Baker ♣**F** ▲ Alves RJV 5454 (R)
Eupatorium myrtilloides DC. ♣**F** ▲ Alves RJV 867 (R)
Eupatorium velutinum Gardner ♣**F** ▲ Alves RJV 1035 (R)
Eupatorium sp. ♣**Fx** ▲ Alves RJV 972 (R)
Gamochaeta americana (Mill.) Wedd. ♣**Fx** ▲ Alves RJV 1141 (R)
Gochnatia amplexifolia (Gardner) Cabrera ♣**Fx** ▲ Alves RJV 369 (R)
Heterocondylus pumilus (Gardner) R. M. King & H. Rob. ♣**Fx** ▲ Mello-Barreto HL 4765 (RB)
Hieracium commersonii Monnier ♣**C** ▲ Duarte AP 4089 (RB)

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Hieracium sp. ♣**C** ▲ Alves RJV 6699 (R)
Hypochaeris brasiliensis (Less.) Benth. & Hook. f. ex Griseb. ♣**Fx** ▲ Alves RJV 1018 (R)
Inulopsis scaposa (Remy) O. Hoffm. ♣**Fx** ▲ Alves RJV 614 (RB)
Koanophyllon myrtilloides (A. P. DC.) R. M. King & H. Rob. ♣**Fx** ▲ Alves RJV 867 (R)
Lepidaploa muricata (DC.) H. Rob. ♣**F** ▲ Alves RJV 4758 (R)
Lepidaploa rufogrisea (A. St.-Hil.) H. Rob. ♣**F** ▲ Alves RJV 564 (R)
Lessingianthus linearifolius (Less.) H. Rob. ♣**Fx** ▲ Alves RJV 1305 (R)
Lessingianthus psilophyllus (DC.) H. Rob. ♣**Fx** ▲ Alves RJV 119 (R, RB)
Lessingianthus simplex (Less.) H. Rob. ♣**Fx** ▲ Alves RJV 59 (R)
Lychnophora blanchetii Schult. Bip. ♣**Fn** ▲ Alves RJV 1307 (R, RB)
Lychnophora columnaris Mattf. ♣**Fx** ▲ Alves RJV 4037 (R)
Lychnophora passerina (Mart. ex DC.) Gardner♣**Fn** ▲ Alves RJV 807 (R)
Lychnophora uniflora Schult. Bip. ♣**Fn** ▲ Alves RJV 912.1 (R)
Lychnophora sp. ♣**Fx** ▲ Alves RJV 1308 (R)
Mikania cordifolia (DC.) Baker ♣**F** ▲ Barbosa M 2312 (RB)
Mikania decumbens Malme ♣**F** ▲ Alves RJV 4031 (R, RB)
Mikania sp. ♣**F** ▲ Peron MV 297 (RB)
Mutisia campanulata Less. ♣**C** ▲ Alves RJV 1381 (R)
Praxelis kleinioides (Kunth) Schult. Bip. ♣**Fx** ▲ Alves RJV 23.1 (R)
Praxelis ostenii (B. L. Rob.) R. M. King & H. Rob. ♣**Fx** ▲ Argolo AM 160 (R)
Pseudobrickellia angustissima (Spreng. ex Baker) R. M. King & H. Rob. ♣**Fx** ▲ Barbosa M 2321 (RB)
Raulinoreitzia crenulata (Spreng.) R. M. King & H. Rob. ♣**Fx** ▲ Duarte AP 3501 (RB)
Richterago polymorpha (Less.) Roque ♣**F** ▲ Alves RJV 369 (RB)
Richterago radiata (Vell.) Roque ♣**F** ▲ Duarte AP 4088 (RB)
Senecio adamantinus Bongard ♣**Fx** ▲ Alves RJV 6831 (R)
Senecio pohlii Schult. Bip. ex Baker ♣**Fx** ▲ Duarte AP 8731 (RB)
Senecio sp. ♣**Fx** ▲ Alves RJV 940 (R)
Solidago sp. ♣**C** ▲ Alves RJV 5811 (R)
Stevia collina Gardner ♣**Fx** ▲ Alves RJV 7390 (R)
Stevia lundiana DC. ♣**Fx** ▲ Duarte AP 4076 (RB)
Stevia ophryophylla B. L. Rob. ♣**Fx** ▲ Alves RJV 385 (RB)
Stevia sp. ♣**Fx** ▲ Alves RJV 4759 (R)
Symphyopappus compressus (Gardner) B. L. Rob. ♣**Fx** ▲ Alves RJV 1034 (R)
Symphyopappus cuneatus (DC.) Schult. Bip. ♣**Fx** ▲ Alves RJV 4028 (R)
Symphyopappus reticulatus Baker ♣**Fx** ▲ Alves RJV 4337 (RB)
Symphyopappus sp. ♣**Fx** ▲ Alves RJV 4804 (R)
Tagetes sp. ♣**T** ▲ Alves RJV 5836 (R)
Tilesia baccata (L.) Pruski ♣**C** ▲ Alves RJV 4424 (RB)
Trixis antimenorrhoea (Schrank) Kuntze ♣**F** ▲ Alves RJV 5310 (R)
Trixis glutinosa D. Don ♣**F** ▲ Alves RJV 5446 (R)
Trixis nobilis (Vell.) Katinas ♣**F** ▲ Alves RJV 4718 (R)
Trixis vauthieri DC. ♣**F** ▲ Alves RJV 1030 (R)
Vernonia elsieae J. G. Stutts ♣**Fx** ▲ Silveira AA da 1257 (RB)
Vernonia ferruginea Less. ♣**Fx** ▲ Alves RJV 5450 (R)
Vernonia graminifolia (A. Gray) Trel. ♣**Fx** ▲ Alves RJV 119 (RB)
Vernonia herbacea (Vell.) Rusby ♣**Fx** ▲ Alves RJV 904 (R)
Vernonia nitidula Less. ♣**Fn** ▲ Alves RJV 971 (R)
Vernonia pedunculata (DC. ex Pers.) DC. ♣**Fn** ▲ Alves RJV 5281 (R)
Vernonia radula DC. ♣**Fn** ▲ Duarte AP 9033 (RB)
Vernonia rubriramea Mart. ex DC. ♣**F** ▲ Alves RJV 4000.7 (R)
Vernonia rugulosa Schult. Bip. ex Baker ♣**Fx** ▲ Lima A 21 (RB)

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Vernonia tragiaefolia DC. ♣**Fx** ▲ Duarte AP 4078 (RB)
Vernonia sp. ♣**Fx** ▲ Barbosa M 2301 (RB)
Viguiera robusta Gardner ♣**Fx** ▲ Alves RJV 878 (R)

Balanophoraceae
Langsdorffia hypogaea Mart. ♣**G** ▲ Alves RJV 5072.2 (R)

Balsaminaceae
Impatiens sp. ♣**T** ▲ Alves RJV 4365 (R)

Begoniaceae
Collaborator: Eliane Lima Jacques (RBR).
Begonia hirtella Link ♣**C** ▲ Alves RJV 149 (R)
Begonia lobata Schott ♣**C** ▲ Alves RJV 310 (RB)
Begonia reniformis Dryander ♣**C** ▲ Alves RJV 310 (R)
Begonia sp. ♣**L** ▲ Alves RJV 4818 (R)

Berberidaceae
Berberis sp. ♣**F** ▲ Peron MV 352 (RB)

Bignoniaceae
Adenocalymma paulistarum Bureau ♣**F** ▲ Duarte AP 3468 (RB)
Anemopaegma sp. ♣**Fx** ▲ Alves RJV 114 (R)
Arrabidaea sceptrum (Cham.) Sandwith ♣**Fx** ▲ Duarte AP 34971 (RB)
Arrabidaea selloi (Spreng.) Sandwith ♣**Fx** ▲ Alves RJV 5321 (R)
Clytostoma ramentaceum (Mart. ex DC.) Bureau & K. Schum. ♣**Fx** ▲ Alves RJV 5322 (R)
Cybistax antisyphilitica (Mart.) Mart. ♣**C** ▲ Alves RJV (R)
Distictella sp. ♣**C** ▲ Alves RJV 982 (R)
Jacaranda caroba (Vell.) DC. ♣**F** ▲ Vieira CM 839 (RB)
Jacaranda decurrens Cham. ♣**Fx** ▲ Alves RJV s.n. (R, RB)
Jacaranda paucifoliolata Mart. ex A. DC. ♣**Fx** ▲ Alves RJV 40 (R)
Jacaranda sp. ♣**Fx** ▲ Alves RJV 63 (R)
Paragonia pyramidata (Rich.) Bur. ♣**F** ▲ Duarte AP 4082 (RB)
Tabebuia chrysotricha (Mart. ex A. DC.) Standl. ♣**F** ▲ Alves RJV 997 (R)
Tabebuia sp. ♣**F** ▲ Alves RJV 6337 (R)

Bombacaceae
Pseudobombax longiflorum (Mart. & Zucc.) A. Robyns ♣**F** ▲ Alves RJV s.n. (R)

Boraginaceae
Cordia sp. ♣**F** ▲ Alves RJV 6282 (R)
Heliotropium transalpinum Vell. ♣**C** ▲ Alves RJV 148 (R)

Bromeliaceae
Collaborators: Andrea Costa (R), Andréia Lúcia Pereira de Oliveira (R), Fernando Tatagiba (R), Gustavo Martinelli (RB), Talita Fontoura (RB).
Aechmea bromeliifolia (Rudge) Baker ♣**E** ▲ Alves RJV 61 (RB)
Aechmea distichantha Lemaire ♣**L** ▲ Alves RJV 729 (RB)
Aechmea nudicaulis (L.) Griseb. var. *aureo-rosea* (Antoine) L. ♣**L** ▲ Alves RJV 117 (R)
Billbergia amoena (Lodd.) Lindl. ♣**L** ▲ Alves RJV 4373 (R)
Billbergia elegans Mart. ex Schult. & Schult. f. ♣**L** ▲ Alves RJV 14 (R)

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Bromelia antiacantha Bertoli ♣**H** ▲ Alves RJV 5051 (R)
Cryptanthus schwackeanus Mez ♣**L** ▲ Alves RJV 145 (R)
Dyckia argentea Mez ♣**L** ▲ Alves RJV 77 (R)
Dyckia lagoensis Mez ♣**L** ▲ Alves RJV 77.2 (R)
Dyckia minarum Mez ♣**L** ▲ Alves RJV s.n. (R)
Dyckia schwackeana Mez ♣**L** ▲ Alves RJV s.n. (R)
Dyckia sp. ♣**L** ▲ Alves RJV 12 (R)
Pitcairnia flammea Lindl. var. *spinulosa* E. Pereira ♣**L** ▲ Alves RJV 5824 (R)
Pitcairnia lanuginosa Ruiz & Pavon ♣**L** ▲ Alves RJV 4444 (R)
Tillandsia gardneri Lindley ♣**L** ▲ Alves RJV 235 (R)
Tillandsia geminiflora Brongn. ♣**E** ▲ Alves RJV s.n. (R)
Tillandsia recurvata (L.) L. ♣**E** ▲ Alves RJV (RB)
Tillandsia streptocarpa Baker ♣**L** ▲ Alves RJV 145 (R)
Tillandsia stricta Solander var. *stricta* ♣**E** ▲ Alves RJV 26 (R)
Tillandsia tenuifolia L. ♣**L** ▲ Alves RJV 315 (R)
Tillandsia usneoides (L.) L. ♣**E** ▲ Alves RJV 233 (R)
Vriesea carinata Wawra ♣**E** ▲ Alves RJV 4425 (RB)
Vriesea aff. *lubbersii* (Baker) E. Morren ex Mez ♣**E** ▲ Alves RJV 5800 (R)
Vriesea procera (Mart. ex Schult.) ♣**L** ▲ Alves RJV s.n. (R)
Vriesea saxicola L. B. Smith ♣**L** ▲ Alves RJV (RB)
Vriesea vagans (L. B. Smith) L. B. Smith ♣**E** ▲ Alves RJV 4429 (RB)
Vriesea sp. ♣**L** ▲ Alves RJV 5825 (R)

Buddlejaceae
Buddleja sp. ♣**C** ▲ Alves RJV 6141 (R)

Burmanniaceae
Indet. sp. ♣**T** ▲ Alves RJV 6052 (R)

Burseraceae
Protium brasiliense (Sprengel) Engler ♣**F** ▲ Alves RJV 5963 (R)
Protium heptaphyllum (Aubl.) March. ♣**F** ▲ Alves RJV 1366 (R)
Protium icicariba (DC.) March. ♣**F** ▲ Alves RJV 5314 (R)
Protium sp. ♣**F** ▲ Vianna MC s.n. (GUA)

Cactaceae
Arthrocereus melanurus (K. Schum.) Diers, P. J. Braun & Esteves ssp. *melanurus* ♣**C** ▲ Alves RJV 4722 (R, RB)
Epiphyllum phyllanthus (L.) Haw. var. *phyllanthus* ♣**L** ▲ Alves RJV s.n. (R)
Hatiora salicornioides (Haw.) Britton & Rose in L. H. Bailey ♣**L** ▲ Alves RJV 291 (R)
Lepismium houlletianum (G. Lindb.) Barthlott & N. P. Taylor ♣**E** ▲ Alves RJV 6301 (RB)
Pereskia aculeata Muller ♣**Fx** ▲ Alves RJV 467 (R)
Pereskia grandiflora Pfeiff. ♣**F** ▲ Alves RJV 6316 (R)
Rhipsalis cereuscula Haw. ♣**E** ▲ Alves RJV 5295 (R)
Rhipsalis aff. *floccosa* Salm-Dyck ex Pfeiff. ♣**E** ▲ Alves RJV 4721 (R)
Rhipsalis floccosa Salm-Dyck ex Pfeiff. ♣**E** ▲ Scheinvar L 6300 (RB)

Campanulaceae
Hippobroma longiflora (L.) G. Don ♣**T** ▲ Alves RJV 4331 (R)
Lobelia camporum Pohl ♣**Fx** ▲ Alves RJV 6073 (R)
Siphocampilus corymbiferus Pohl ♣**Fn** ▲ Alves RJV 279 (R)

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Siphocampylus gracilis Britton ♣**Fn** ▲ Alves RJV 4027 (R, RB)
Siphocampylus imbricatus (Cham.) G. Don ♣**Fn** ▲ Alves RJV 4178 (RB)
Siphocampylus sulfureus E. Wimm. ♣**Fn** ▲ Duarte AP 3472 (RB)
Siphocampylus verticillatus E. Wimm. ♣**Fn** ▲ Duarte AP 3748 (RB)
Siphocampylus aff. *westinianus* (Thunb.) Pohl ♣**Fn** ▲ Alves RJV 4816 (R)
Siphocampylus westinianus (Thunb.) Pohl ♣**Fn** ▲ Alves RJV 4344 (RB)
Wahlenbergia brasiliensis Cham. ♣**Fx** ▲ Alves RJV 562 (R)
Wahlenbergia linarioides (Lam.) A. DC. ♣**Fx** ▲ Duarte AP 3488 (RB)

Capparaceae
Cleome gigantea L. ♣**T** ▲ Alves RJV 4763 (R)
Cecropiaceae
Cecropia catarinensis Cuatrec. ♣**F** ▲ Alves RJV 339, 1702 (R)
Cecropia lyratiloba Miquel ♣**F** ▲ Vianna MC s.n. (GUA)
Cecropia sp. ♣**F** ▲ Alves RJV 5859 (R)
Coussapoa microcarpa (Schott) Rizzini ♣**F** ▲ Vianna Filho MDM et al. 1696 (R)

Celastraceae
Plenckia populnea Reissek ♣**F** ▲ Alves RJV 550 (R)

Chloranthaceae
Hedyosmum brasiliense Mart. ♣**F** ▲ Alves RJV 5818 (R)

Clethraceae
Clethra scabra Pers. ♣**F** ▲ Alves RJV 1540 (RB)

Clusiaceae
Collaborators: †Nagib Saddi (UFMT), Cláudia Magalhães Vieira (RB).
Calophyllum brasiliense Cambess. ♣**F** ▲ Alves RJV 5961.1 (R)
Clusia arrudea Planch. & Triana ex Engl. ♣**F** ▲ Alves RJV 963 (R)
Clusia criuva Cambess. ♣**F** ▲ Alves RJV 4325 (RB)
Clusia sp. ♣**F** ▲ Peron MV 310 (RB)
Kielmeyera coriacea Mart. & Zucc. ♣**F** ▲ Alves RJV 843 (R)
Kielmeyera cf. *regalis* Saddi ♣**Fx** ▲ Alves RJV 4367 (R)
Kielmeyera cf. *rosea* Mart. & Zucc. ♣**Fx** ▲ Alves RJV 5941 (R)
Kielmeyera variabilis Mart. ♣**Fx** ▲ Alves RJV 152 (R)

Combretaceae
Terminalia glabrescens Mart. ♣**F** ▲ Alves RJV s.n. (RB)

Commelinaceae
Commelina agraria Kunth ♣**C** ▲ Alves RJV 69 (R)
Commelina diffusa Burm. f. ♣**C** ▲ Alves RJV 239 (R)
Commelina erecta L. ♣**C** ▲ Alves RJV sn. (R)
Commelina sp. ♣**C** ▲ Alves RJV 284 (R)
Dichorisandra hexandra (Aubl.) Standl. ♣**G** ▲ Alves RJV 5804 (R)
Dichorisandra sp. ♣**G** ▲ Alves RJV 846 (R)
Tradescantia fluminensis Velloso ♣**C** ▲ Peron MV 358 (RB)
Tradescantia sp. ♣**C** ▲ Alves RJV 5832 (R)

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Convolvulaceae
Collaborator: Rosângela Simão Bianchini (SPF).
Evolvulus gypsophiloides Moric. ♣**Fx** ▲ Alves RJV 938 (R)
Evolvulus helichrysoides Moric. ♣**Fx** ▲ Alves RJV s.n. (R)
Evolvulus lithospermoides Mart. ♣**Fx** ▲ Alves RJV s.n. (R)
Evolvulus sericeus Sw. ♣**Fx** ▲ Alves RJV 870 (R)
Ipomoea cairica (L.) Sw. ♣**G** ▲ Alves RJV 281 (R)
Ipomoea delphinioides Choisy ♣**Fx** ▲ Alves RJV 4343 (RB)
Ipomoea indica R. Br. ♣**G** ▲ Alves RJV 281 (RB)
Ipomoea sp. ♣**Fx** ▲ Alves RJV 238 (R)

Costaceae
Costus sp. ♣**G** ▲ Alves RJV 5650 (R)

Crassulaceae
Kalanchoe fedtschenkoi Raym.-Harnet & H. Perrier ♣**L** ▲ Alves RJV s. n. (R)
Kalanchoe integra (Medik.) Kuntze var. *verea* Cufod. ♣**L** ▲ Alves RJV 913.1 (R)

Cucurbitaceae
Fervillea trilobata L. ♣**T** ▲ Alves RJV 4780 (R)
Wildbrandia sp. ♣**T** ▲ Alves RJV 5390 (R)

Cunoniaceae
Lamanonia cuneata (Camb.) O. Kuntze ♣**F** ▲ Alves RJV 6312 (R)

Cuscutaceae
Cuscuta racemosa Mart. ♣**E** ▲ Alves RJV 5508 (R)

Cyperaceae
Collaborators: Ana Claudia Araujo (ICN), Marccus Alves (UFP), Mark T. Strong (US).
Bulbostylis capillaris (L.) C. B. Clarke ♣**H** ▲ Alves RJV 181 (R)
Bulbostylis consanguinea Nees ♣**H** ▲ Alves RJV 776 (R)
Bulbostylis junciformis (Kunth) C. B. Clarke ♣**H** ▲ Alves RJV 1080 (R)
Bulbostylis lagoensis (Boeck.) A. Prata & M. G. López ♣**H** ▲ Alves RJV 181 (RB)
Bulbostylis paradoxa (Spreng.) Lindm. ♣**Fn** ▲ Alves RJV 559 (R)
Bulbostylis sp. ♣**H** ▲ Alves RJV 783 (R)
Cyperus cf. *cyperinus* (Retz.) Suringar ♣**H** ▲ Alves RJV 844 (R)
Cyperus cf. *flavus* (Vahl) Nees ♣**H** ▲ Alves RJV 855 (R)
Cyperus lanceolatus Poir. ♣**H** ▲ Alves RJV 230 (R)
Cyperus sp. ♣**H** ▲ Alves RJV (RB)
Eleocharis elegans (Kunth) Roem. & Schult. ♣**G** ▲ Alves RJV 781 (R)
Eleocharis montana (Kunth) Roem. & Schult. ♣**G** ▲ Alves RJV 1077 (R)
Eleocharis aff. *montana* (Kunth) Roem. & Schult. ♣**G** ▲ Alves RJV 4850 (R)
Fimbristylis dichotoma (L.) Vahl ♣**H** ▲ Alves RJV sn. (R)
Fimbristylis spadicea Vahl ♣**H** ▲ Duarte AP 3769 (RB)
Lagenocarpus humilis Kuntze ♣**L** ▲ Duarte AP 3513 (RB)
Lagenocarpus parvulus (C. B. Clarke) H. Pfeiff. f. ▲ Alves RJV 4346 (R)
Lagenocarpus polyphyllus (Nees) O. Kuntze ♣**L** ▲ Alves RJV 1076 (R)
Lagenocarpus rigidus (Kunth) Nees ssp. *rigidus* ♣**L** ▲ Alves RJV 1078 (R)
Lagenocarpus rigidus (Kunth) Nees ssp. *tenuifolius* (Boeck.) T. Koyama & Maguire ♣**L** ▲ Alves RJV 1005 (R)

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Lagenocarpus verticillatus (Spreng.) T. Koyama & Maguire ♣**L** ▲ Alves RJV 819 (R)
Machaerina ensifolia (Boeck.) T. Koyama ♣**F** ▲ Alves RJV s.n. (R)
Rhynchospora albiceps Kunth ♣**H** ▲ Wagner HML 7059.1 (R)
Rhynchospora capitata (Kunth) Roem. & Schult. ♣**H** ▲ Alves RJV 5346 (R)
Rhynchospora aff. *capitata* (Kunth) Roem. & Schult. ♣**H** ▲ Alves RJV 5922 (R)
Rhynchospora consanguinea (Kunth) Boeck. ♣**H** ▲ Alves RJV 1013 (R)
Rhynchospora cryptantha C. B. Clarke ♣**H** ▲ Alves RJV 4986 (POA, R)
Rhynchospora emaciata Boeck. ♣**H** ▲ Duarte W 3478 (RB)
Rhynchospora globosa (Kunth) Roem. & Schult. ♣**H** ▲ Alves RJV 812 (R)
Rhynchospora pallida (Nees) Steud. ♣**H** ▲ Peron MV 299 (RB)
Rhynchospora pilosa (Kunth) Boeck ssp. *pilosa* ♣**H** ▲ Alves RJV 1007 (R)
Rhynchospora recurvata (Nees) Steud. ♣**H** ▲ Alves RJV 780 (R)
Rhynchospora riedeliana C. B. Clarke ♣**H** ▲ Alves RJV 864 (R)
Rhynchospora rugosa (Vahl) Gale ♣**H** ▲ Alves RJV 1012 (R)
Rhynchospora cf. *tenuifolia* Griseb. ♣**H** ▲ Wagner HML 7062 (R)
Rhynchospora tenuis Link. ♣**H** ▲ Alves RJV 274 (R)
Rhynchospora uleana Kük. ♣**H** ▲ Farney C 2450 (RB)
Rhynchospora velutina Pilg. ♣**H** ▲ Duarte AP 3547 (RB)
Rhynchospora sp.1 ♣**H** ▲ Alves RJV 5510 (R)
Rhynchospora sp.2 ♣**H** ▲ Alves RJV 5643 (R)
Scleria bracteata Cav. ♣**C** ▲ Alves RJV 1071 (R)
Scleria secans (L.) Urban ♣**C** ▲ Wagner HML 7067 (R)
Trilepis lhotzkiana Nees ex Arn. ♣**L** ▲ Duarte AP 4084 (RB)
Trilepis microstachya (C. B. Clarke) H. Pfeiff. ♣**L** ▲ Alves RJV 1008 (R)
Trilepis sp. ♣**L** ▲ Duarte AP 4084 (R)

Dilleniaceae
Davilla cf. *aspera* (Aubl.) Benoist ♣**C** ▲ Alves RJV 6988 (R)
Davilla elliptica A. St.-Hil. ♣**C** ▲ Alves RJV 5966 (R)
Davilla rugosa Poir. ♣**C** ▲ Peron MV 359 (RB)
Doliocarpus elegans Eichler ♣**C** ▲ Alves RJV 915.1 (R)
Pinzona sp. ♣**C** ▲ Semir J (RB)

Dioscoreaceae
Dioscorea sp. ♣**G** ▲ Alves RJV 4768 (R)

Droseraceae
Collaborators: Miloslav Studnička (Liberec Botanical Garden), Nílber Silva (R).
Drosera communis A. St.-Hil. ♣**H** ▲ Alves RJV 343 (R)
Drosera hirtella A. St.-Hil. var. *lutescens* A. St.-Hil. ♣**H** ▲ Silva NG (R)
Drosera montana A. St.-Hil. var. *montana* A. St.-Hil. ♣**H** ▲ Alves RJV 342 (R)
Drosera tomentosa A. St.-Hil. var. *glabrata* A. St.-Hil. ♣**H** ▲ Silva NG 189 (R)

Ebenaceae
Diospyros hispida A. DC. ♣**F** ▲ Alves RJV (R)
Diospyros inconstans Jacq. ♣**F** ▲ Alves RJV 5861 (R)

Ericaceae
Collaborator: † Jose Augusto Fernandes da Costa (HB, R).
Agarista chlorantha G. Don ♣**Fn** ▲ Mello-Barreto HL 4787 (RB)
Agarista coriifolia (Thunb.) Hook. f. ex Nied. var. *reticulata* Meissn. ♣**Fn** ▲ Alves RJV 7 (R)

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Agarista oleifolia G. Don var. *oleifolia* ♣**Fn** ▲ Duarte AP 3505 (R)
Gaylussacia brasiliensis (Spreng.) Meisn. var. *pubescens* (Cham. & Schltdl.) Meisn. ♣**F** ▲ Alves RJV 1063 (R)
Gaylussacia decipiens Cham. ♣**F** ▲ Alves RJV 790 (R)
Gaylussacia montana (Pohl) Sleumer ♣**Fn** ▲ Alves RJV 791 (R)
Gaylussacia pallida Cham. ♣**F** ▲ Duarte AP 3519 (RB)
Gaylussacia riedelii Meisn. ♣**Fx** ▲ Alves RJV 789 (R)

Eriocaulaceae
Collaborator: Ana Maria Giulietti (SPF).
Actinocephalus bongardii (A. St.-Hil.) Sano ♣**H** ▲ Leitão f. HF 19327 (RB)
Eriocaulon cipoense Alv. Silv. ♣**T** ▲ Alves RJV 25 (R)
Leiothrix prolifera (Bong.) Ruhland ♣**C** ▲ Alves RJV 231 (R)
Paepalanthus aequalis (Vell.) Mart. ♣**H** ▲ Alves RJV 915 (R)
Paepalanthus bifidus Ruhland in Urb. ♣**H** ▲ Alves RJV 4225 (RB)
Paepalanthus cf. *brasiliensis* Mart. ♣**H** ▲ Alves RJV 302 (R)
Paepalanthus cf. *corymbosus* (Bong.) Kunth ♣**H** ▲ Alves RJV 752 (R)
Paepalanthus elongatus (Bong.) Körn. ♣**H** ▲ Alves RJV 554 (R)
Paepalanthus planifolius (Bong.) Körn. ♣**F** ▲ Alves RJV 9 (R, SPF)
Paepalanthus plantagineus (Bong.) Körn. ♣**F** ▲ Alves RJV 158 (R, SPF)
Paepalanthus saxatilis Körn. ♣**H** ▲ Alves RJV 344 (R)
Paepalanthus sebranthus Ruhland ♣**T** ▲ Alves RJV 4015 (R)
Paepalanthus sp. ♣**H** ▲ Alves RJV 45 (R)
Syngonanthus caulescens (Poir.) Ruhland ♣**H** ▲ Alves RJV 183 (R, SPF)
Syngonanthus aff. *caulescens* (Poir.) Ruhland ♣**H** ▲ Alves RJV 5987 (R)
Syngonanthus elegans (Koern.) Ruhland ♣**H** ▲ Alves RJV 4879 (R)
Syngonanthus aff. *elegans* (Koern.) Ruhland ♣**H** ▲ Alves RJV 5050 (R)
Syngonanthus gracilis (Bong.) Ruhland ♣**H** ▲ Alves RJV 275 (R)
Syngonanthus macrocaulon Ruhland ♣**H** ▲ Alves RJV 229 (R)
Syngonanthus nitens (Bong.) Ruhland ♣**H** ▲ Alves RJV 955 (R)
Syngonanthus niveus (Bong.) Ruhland ♣**H** ▲ Alves RJV 95 (R)
Syngonanthus sp. ♣**H** ▲ Alves RJV 5971 (R)
Syngonanthus habrophyus Ruhland ♣**H** ▲ Mello-Barreto HL 4794 (R)

Erythroxylaceae
Erythroxylum campestre A. St.-Hil. ♣**F** ▲ Alves RJV 1098 (R)
Erythroxylum deciduum A. St.-Hil. ♣**Fn** ▲ Alves RJV 1099 (R)
Erythroxylum tortuosum Mart. ♣**Fn** ▲ Kuhlmann JG 4272 (RB)
Erythroxylum aff. *tortuosum* Mart. ♣**F** ▲ Alves RJV 5413 (R)
Erythroxylum sp. ♣**Fx** ▲ Prof. José Elias (RB)

Euphorbiaceae
Collaborators: Débora Medeiros (R), Luci de Senna Valle (R), Margarete Emmerich (R).
Chamaesyce caecorum (Mart. ex Boiss.) Croizat ♣**Fx** ▲ Alves RJV 573 (R)
Chamaesyce hyssopifolia (L.) Small ♣**C** ▲ Alves RJV 759 (R)
Chamaesyce prostrata (Aiton) Small ♣**Fx** ▲ Alves RJV Rel50-61 (R)
Croton antisyphiliticus Mart. ♣**Fx** ▲ Alves RJV 881 (R)
Croton arlineae D. Medeiros, Senna & Alves ♣**Fx** ▲ Medeiros D 31 (R)
Croton campestris A. St.-Hil. ♣**Fx** ▲ Alves RJV 6936 (R)
Croton floribundus Spreng. ♣**F** ▲ Medeiros D 134 (R)
Croton gnidiaceus Baill. ♣**Fx** ▲ Medeiros D 66 (R)

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Croton josephinus Müll. Arg. ♣**Fx** ▲ Alves RJV 8345 (R)
Croton lobatus L. ♣**F** ▲ Duarte AP 3767 (RB)
Croton thermarum Muell. Arg. ♣**Fx** ▲ Vianna MC Serra de São José 111 (GUA)
Croton timandroides (Didr.) Müll. Arg. ♣**Fx** ▲ Medeiros D 3 (R)
Croton urucurana Baill. ♣**F** ▲ Alves RJV 6953 (R)
Croton vestitus Spreng. ♣**Fx** ▲ Alves RJV 6937 (RB)
Euphorbia chrysophylla (Klotzsch & Garcke) G. Klotz ex Boiss. ♣**Fx** ▲ Alves RJV 740 (R)
Euphorbia sp.1 ♣**Fx** ▲ Duarte AP 3516 (RB)
Euphorbia sp.2 ♣**Fx** ▲ Duarte AP 3499 (RB)
Sebastiania brasiliensis Spreng. ♣**Fx** ▲ Alves RJV 6313 (R)

Gentianaceae
Collaborator: Elsie Franklin Guimarães (RB).
Chelonanthus alatus (Aubl.) Pulle ♣**Fx** ▲ Alves RJV 726 (R)
Chelonanthus viridiflorus (Mart.) Gilg ♣**Fx** ▲ Alves RJV s.n. (RB)
Curtia tenuifolia (Aubl.) Knobl. ♣**T** ▲ Alves RJV 4002 (RB)
Deianira nervosa Cham. & Schltdl. ♣**Fx** ▲ Alves RJV 620 (R)
Lisianthius caerulescens Aubl. ♣**Fx** ▲ Alves RJV s.n. (RB)
Lisianthius pulcherrimus Mart. ♣**Fx** ▲ Alves RJV 228 (R)
Lisianthius speciosus Cham. & Schltdl. ♣**Fx** ▲ Alves RJV 4814 (R)
Schuebleria tenella Mart. ♣**C** ▲ Alves RJV 6051 (R)
Schultesia gracilis Mart. ♣**T** ▲ Alves RJV 277 (R)

Gesneriaceae
Collaborator: Thereza Cristina Costa Lopes (R, RB).
Besleria laxiflora Benth. ♣**Fx** ▲ Alves RJV 286 (R)
Nematanthus strigillosus (Mart.) H. E. Moore ♣**Fx** ▲ Alves RJV 161 (RB)
Paliavana sericiflora Benth. ♣**Fx** ▲ Alves RJV 312 (RB)
Sinningia aggregata (Ker Gawl.) Wiehler ♣**G** ▲ Alves RJV 4378 (RB)
Sinningia douglasii (Lindl.) Chaute ♣**Fx** ▲ Alves RJV 5586 (R)
Sinningia magnifica (Otto & A. Dietr.) Wiehler ♣**Fx** ▲ Alves RJV 466 (R)
Sinningia rupicola (Mart.) Wiehler ♣**Fx** ▲ Alves RJV 838 (R)
Sinningia sp. ♣**Fx** ▲ Alves RJV 4377 (R)

Heliconiaceae
Heliconia aff. *psittacorum* L. f. ♣**G** ▲ Alves RJV 4256 (R)

Hypericaceae
Hypericum brasiliense Choisy ♣**C** ▲ Alves RJV 6329 (R)

Hypoxidaceae
Hypoxis decumbens L. ♣**G** ▲ Alves RJV (R)

Iridaceae
Sisyrinchium alatum Hook. ♣**G** ▲ Alves RJV 308 (R)
Sisyrinchium avenaceum Klatt ♣**G** ▲ Alves RJV 4443.5 (R)
Sisyrinchium vaginatum Spreng. ♣**G** ▲ Alves RJV 66 (R)
Sisyrinchium sp. ♣**G** ▲ Alves RJV 169 (R)
Trimezia juncifolia Klatt ♣**G** ▲ Alves RJV 345 (R)
Trimezia sp. ♣**G** ▲ Alves RJV 935 (R)

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Juncaceae
Juncus densiflorus Kunth ♣**H** ▲ Alves RJV 782 (R)
Juncus sp. Kunth ♣**H** ▲ Alves RJV 5817 (R)

Lacistemataceae
Lacistema aggregatum (Berg) Rusby ♣**F** ▲ Alves RJV 5872 (R)

Lamiaceae
Collaborator: Raymond Harley (K).
Hyptidendron asperrimum (Epling) Harley ♣**F** ▲ Alves RJV 990 (R, RB, K)
Hyptis althaefolia Pohl ex Benth. ♣**F** ▲ Alves RJV 801 (R)
Hyptis carpinifolia Benth. ♣**Fx** ▲ Alves RJV 6983 (R)
Hyptis claussenii Benth. ♣**Fx** ▲ Alves RJV 348.1 (R)
Hyptis complicata A. St.-Hil. ex Benth. ♣**Fx** ▲ Alves RJV 379 (RB)
Hyptis conferta Pohl ex Benth. ♣**Fx** ▲ Alves RJV 380 (RB)
Hyptis crinita Benth. ♣**Fx** ▲ Alves RJV 1360 (R, K)
Hyptis cf. *cuneata* Pohl ex Benth. ♣**Fx** ▲ Alves RJV 568 (R, K)
Hyptis aff. *fruticosa* Salzm. ex Benth. ♣**F** ▲ Alves RJV 212.1 (R)
Hyptis aff. *gardneri* Benth. ♣**Fn** ▲ Alves RJV 387 (R)
Hyptis gardneri Benth. ♣**Fn** ▲ Alves RJV 804 (R)
Hyptis lantanifolia Poit. ♣**Fn** ▲ Alves RJV 381 (R)
Hyptis monticola Mart. ex Benth. ♣**Fx** ▲ Alves RJV 567 (R, K)
Hyptis passerina Mart. ex Benth. ♣**Fx** ▲ Alves RJV 4037 (RB)
Hyptis aff. *passerina* Mart. ex Benth. ♣**Fx** ▲ Alves RJV 5477 (R)
Hyptis petraea A. St.-Hil. ex Benth. ♣**Fx** ▲ Alves RJV s.n. (RB)
Hyptis reticulata Mart. ex Benth. ♣**Fn** ▲ Alves RJV 913 (R)
Hyptis selloi Benth. ♣**Fx** ▲ Schwacke (RB)
Hyptis virgata Benth. ♣**Fx** ▲ Alves RJV 125 (R)
Hyptis sp. ♣**F** ▲ Alves RJV 328 (R)
Ocimum micranthum Willd. ♣**C** ▲ Alves RJV s.n. (R)
Peltodon tomentosus Pohl ♣**C** ▲ Alves RJV 381 (RB)
Rhabdocaulon denudatum (Benth.) Epling ♣**Fx** ▲ Alves RJV 877 (R)
Lauraceae
Ocotea odorifera (Vell.) Rohwer ♣**F** ▲ Barbosa M 2155 (RB)
Ocotea tristis Mart. ex Nees ♣**F** ▲ Peron MV 325 (RB)
Persea sp. ♣**F** ▲ Barbosa M 2169 (RB)

Leguminosae
Collaborators: Gwilym P. Lewis (K), Haroldo Lima (RB), Marli Pires Morim (RB), Robson Daumas Ribeiro (RB) Ronaldo Marquete (RB), Veronica Maioli (R).
Acosmium dasycarpum (Vogel.) Yakol. ♣**Fn** ▲ Alves RJV 206 (RB)
Andira fraxinifolia Benth. ♣**Fx** ▲ Maioli V 317 (R)
Andira vermifuga Mart. ex Benth. ♣**Fx** ▲ Alves RJV 111 (RB)
Andira sp. ♣**Fx** ▲ Alves RJV 905 (R)
Bauhinia variegata L. ♣**C** ▲ Tabacow J s.n. (RB)
Caesalpinia sp. ♣**F** ▲ Marquete R 3982 (RB)
Calliandra dysantha (Benth.) Sog. ♣**Fn** ▲ Alves RJV 900 (R)
Calliandra sp. ♣**Fn** ▲ Alves RJV 1156 (R)
Calopogonium velutinum (Benth.) Amshoff ♣**F** ▲ Alves RJV 373 (R)
Camptosema scarlatinum (Mart. ex Benth.) Burk. ♣**Fx** ▲ Alves RJV 38 (R)
Cassia splendida Vog. ♣**F** ▲ Alves RJV 392 (RB)

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Cassia sp. ♣**F** ▲ Alves RJV 4760 (R)
Centrosema sp. ♣**Fn** ▲ Alves RJV 6334 (R)
Chamaecrista cathartica (Mart.) Irwin & Barneby ♣**Fn** ▲ Alves RJV 60 (RB)
Chamaecrista desvauxii (Colladon) Killip ♣**Fn** ▲ Alves RJV s.n. (R)
Chamaecrista hedysaroides (Vogel) H. S. Irwin & Barneby ♣**Fn** ▲ Alves RJV 5984 (R)
Chamaecrista nictitans (L.) Moench subsp. *brachypoda* (Benth.) H. S. Irwin & Barneby ♣**Fn** ▲ Alves RJV 1049 (R)
Chamaecrista rotundata (Vogel) H. S. Irwin & Barneby ♣**Fn** ▲ Alves RJV 732 (RB)
Chamaecrista rotundata (Vogel) H. S. Irwin & Barneby var. *interstes* H. S. Irwin & Barneby ♣**Fn** ▲ Alves RJV 595.1 (R)
Chamaecrista rotundata (Vogel) H. S. Irwin & Barneby var. *rotundata* ♣**Fn** ▲ Alves RJV 734 (R)
Chamaecrista rotundifolia (Pers.) Greene var. *rotundifolia* ♣**Fx** ▲ Alves RJV 391 (R)
Clitoria guianensis (Aubl.) Benth. var. *guianensis* ♣**Fx** ▲ Alves RJV 488 (R)
Collaea speciosa DC. ♣**C** ▲ Alves RJV 389 (RB)
Copaifera langsdorffii Desf. ♣**F** ▲ Alves RJV (R)
Copaifera sp. ♣**F** ▲ Duarte AP 5110 (RB)
Crotalaria breviflora DC. ♣**Fx** ▲ Alves RJV 163 (R)
Crotalaria sp. ♣**T** ▲ Alves RJV 4035 (RB)
Dalbergia miscolobium Benth. ♣**Fn** ▲ Alves RJV 393 (R, RB)
Desmodium uncinatum (Jacq.) DC. ♣**Fn** ▲ Alves RJV 165 (RB)
Desmodium sp. ♣**Fn** ▲ Alves RJV 4440 (RB)
Enterolobium gummiferum (Mart.) J. F. Macbr. ♣**F** ▲ Alves RJV 5901 (R)
Eriosema crinitum (Kunth) G. Don ♣**Fn** ▲ Alves RJV 934 (R)
Eriosema heterophyllum Benth. ♣**Fx** ▲ Alves RJV 53 (RB)
Galactia macrophylla (Benth.) Taub. ♣**Fx** ▲ Alves RJV 908 (R)
Galactia aff. *martii* DC. ♣**Fx** ▲ Alves RJV 796 (R)
Galactia speciosa (Loisel.) Britton ♣**Fx** ▲ Alves RJV 34 (R)
Inga sp. ♣**F** ▲ Alves RJV 1321 (R)
Leucochlorum incuriale (Vell.) Barneby & J. W. Grimes ♣**Fn** ▲ Maioli V 310 (R)
Machaerium hirtum (Vell.) Stellf. ♣**F** ▲ Maioli V 307 (R)
Machaerium nyctitans (Vell.) Benth. ♣**Fn** ▲ Maioli V 309 (R)
Machaerium villosum Vog. ♣**Fn** ▲ Maioli V 322 (R)
Mimosa invisa Mart. ex Colla ♣**F** ▲ Duarte AP 5115 (RB)
Mimosa polycephala Benth. var. *taxifolia* Barneby ♣**F** ▲ Alves RJV 735 (R)
Mimosa sp. ♣**F** ▲ Alves RJV 394 (RB)
Ormosia arborea (Vell.) Harms ♣**F** ▲ Alves RJV 1321 (R, K)
Ormosia sp. ♣**Fn** ▲ Prof. José Elias 3 (RB)
Periandra sp. ♣**Fn** ▲ Vianna MC Serra de São José 113 (GUA)
Senna bicapsularis (Harms) H. S. Irwin & Barneby ♣**C** ▲ Alves RJV 737 (R)
Senna cf. *organensis* (Harms) H. S. Irwin & Barneby ♣C ▲ Alves RJV 4761 (R)
Senna rugosa (G. Don) H. S. Irwin & Barneby ♣**Fn** ▲ Barbosa M 2264 (RB)
Stryphnodendron adstringens (Mart.) Coville ♣**F** ▲ Alves RJV 591 (R)
Stryphnodendron cf. *obovatum* Benth. ♣**F** ▲ Maioli V 315 (R)
Stryphnodendron rotundifolium Mart. ♣**F** ▲ Barbosa M 2165 (RB)
Stryphnodendron sp. ♣**F** ▲ Alves RJV 6266 (R)
Stylosanthes bracteata Vogel ♣**C** ▲ Vianna MC 2369 (GUA)
Stylosanthes guianensis (Aubl.) Benth. ♣**C** ▲ Alves RJV 1353 (R)
Stylosanthes sp. ♣**C** ▲ Alves RJV 876 (R)
Vigna sp. ♣**C** ▲ Alves RJV 5397 (R)
Zornia gemella (Willd.) Vog. ♣**C** ▲ Alves RJV 159 (R, RB)
Zornia sp. ♣**C** ▲ Barbosa M 2324 (RB)

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Lentibulariaceae
Collaborators: Elsa Fromm Trinta (R), Miloslav Studnička (Liberec Botanical Garden), Nílber Silva (R).
Genlisea filiformis A. St.-Hil. ♣**T** ▲ Alves RJV s.n. (R)
Genlisea violacea A. St.-Hil. ♣**T** ▲ Alves RJV 4016 (R)
Genlisea sp. ♣**T** ▲ Alves RJV 5844 (R)
Utricularia amethystina A. St.-Hil. & Girard ♣**T** ▲ Alves RJV 336 (R)
Utricularia laciniata A. St.-Hil. & Girard ♣**T** ▲ Silva NG 194 (R)
Utricularia neottiodes A. St.-Hil. & Girard ♣**Hy** ▲ Silva NG 188 (R)
Utricularia nervosa Weber ex Benj. ♣**T** ▲ Alves RJV 941 (R)
Utricularia simulans Pilger ♣**T** ▲ Alves RJV 273 (R)
Utricularia subulata L. ♣**T** ▲ Silva NG 219 (R)
Utricularia tricolor A. St.-Hil. ♣**G** ▲ Silva NG 218 (R)
Utricularia triloba Benj. ♣**T** ▲ Alves RJV 341 (R)
Utricularia sp. ♣**H** ▲ Alves RJV 577 (R)

Loganiaceae
Spigelia heliotropoides (Pohl) E. F. Guimar. & Fontella ♣**Fx** ▲ Alves RJV 353 (RB)
Spigelia pusilla Mart. ♣**Fx** ▲ Alves RJV 4134.1 (RB)
Spigelia scabra Cham. & Schltdl. ♣**Fx** ▲ Alves RJV 989 (R)

Loranthaceae
Collaborators: Carlos Henrique Reif de Paula (RUSU), Carlos Toledo Rizzini (RB), Job Kuijt (UVIC).
Psittacanthus robustus (Mart.) Mart. ♣**E** ▲ Reif CH de P s.n. (RB, RUSU)
Psittacanthus sp. ♣**E** ▲ Alves RJV 861 (R)
Struthanthus staphylinus Mart. ♣**E** ▲ Reif CH de P s.n. (RUSU)
Tripodanthus acutifolius (Ruiz & Pav.) Tiegh. ♣**E** ▲ Reif CH de P s.n. (RUSU)

Lythraceae
Collaborators: †Melle Alicia Lourteig (P), Taciana Barbosa Cavalcanti (SPF).
Cuphea balsamona Cham. & Schltdl. ♣**Fx** ▲ Alves RJV 280 (RB)
Cuphea ericoides Cham. & Schltdl. ♣**Fx** ▲ Alves RJV 109 (R)
Cuphea inaequalifolia Koehne ♣**Fx** ▲ Alves RJV 44 (SPF)
Cuphea ingrata Cham. & Schltdl. ♣**Fx** ▲ Alves RJV 178 (R)
Cuphea thymoides Cham. & Schltdl. ♣**Fx** ▲ Alves RJV 561 (R)
Cuphea aff. *thymoides* Cham. & Schltdl. ♣**Fx** ▲ Alves RJV 918 (R)
Cuphea sp. ♣**Fx** ▲ Barbosa M 2314 (RB)
Diplusodon buxifolius Cham. & Schltdl. ♣**Fn**▲ Alves RJV 4024 (R)
Diplusodon virgatus Pohl ♣**Fn** ▲ Alves RJV 147 (R)
Diplusodon aff. *virgatus* Pohl ♣**Fx** ▲ Alves RJV 4909 (R)
Diplusodon sp. ♣**Fx** ▲ Alves RJV 4023 (R)
Lafoensia pacari A. St.-Hil. ♣**F** ▲ Alves RJV 5630 (R)

Magnoliaceae
Talauma ovata A. St.-Hil. ♣**F** ▲ Alves RJV s.n. (R)

Malpighiaceae
Banisteriopsis malifolia (Nees & Mart.) B. Gates ♣**F** ▲ Palmeira M 357 (R)
Banisteriopsis stellaris (Griseb.) B. Gates ♣**Fn** ▲ Alves RJV 126 (R)
Banisteriopsis sp. ♣**Fn** ▲ Alves RJV 5876 (R)
Byrsonima basiloba A. Juss. ♣**F** ▲ Alves RJV 5373 (R)
Byrsonima bumeliaefolia A. Juss. ♣**F** ▲ Alves RJV 474 (R)

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Byrsonima dealbata Griseb. ♣**F** ▲ Vianna MC 2338 (GUA)
Byrsonima variabilis A. Juss. ♣**Fn** ▲ Alves RJV 480 (R)
Byrsonima aff. *verbascifolia* (L.) DC. ♣**Fx** ▲ Alves RJV 5951 (R)
Byrsonima verbascifolia (L.) DC. ♣**F** ▲ Barbosa M 2323 (RB)
Byrsonima sp. ♣**F** ▲ Alves RJV 809 (R)
Camarea affinis A. St.-Hil. ♣**Fx** ▲ Alves RJV 919 (R)
Camarea ericoides A. St.-Hil. ♣**Fx** ▲ Vianna MC 2411 (R)
Heteropterys aenea Griseb. ♣**Fn** ▲ Alves RJV 986 (R)
Heteropterys pannosa Griseb. ♣**Fn** ▲ Barbosa M 2163 (RB)
Heteropterys umbellata Juss. ♣**Fn** ▲ Alves RJV 1070 (R)
Heteropterys sp. ♣**Fn** ▲ Alves RJV 6346 (R)
Mascagnia cordifolia (A. Juss.) Griseb. ♣**Fn** ▲ Alves RJV 806 (R)
Mascagnia sp. ♣**Fn** ▲ Duarte AP 3170 (RB)
Peixotoa reticulata Griseb. ♣**Fn** ▲ Alves RJV 5399 (R)
Peixotoa tomentosa A. Juss. ♣**Fx** ▲ Alves RJV 360 (R)
Peixotoa sp. ♣**Fx** ▲ Alves RJV 897 (R)
Tetrapterys sp. ♣**Fn** ▲ Farney C 2445 (RB)

Malvaceae
Collaborator: Massimo Bovini (RB).
Abutilon sp. ♣**F** ▲ Alves RJV 5632 (R)
Pavonia cf. *garckeana* Gürke ♣**Fx** ▲ Alves RJV 483 (RB)
Pavonia viscosa A. St.-Hil. ♣**Fx** ▲ Alves RJV 296 (RB)
Pavonia sp. ♣**Fx** ▲ Alves RJV 5336 (R)
Sida linifolia Cav. ♣**C** ▲ Alves RJV 4011 (RB)
Sida cf. *rhombifolia* L. ♣**C** ▲ Alves RJV 980 (R)
Sida sp. ♣**C** ▲ Alves RJV 4899 (R)

Marantaceae
Calathea sp. ♣**G** ▲ Alves RJV 4362 (R)

Mayacaceae
Mayaca aubletii Schott & Endl. ♣**Hy** ▲ Alves RJV 5874 (R)

Melastomataceae
Collaborators: MELA †John J. Wurdack (US), Angela Borges Martins (UEC), Frank Almeda (CAS), José Fernando Baumgratz (RB), Renato Goldenberg (UPCB), Rosana Augstroze Rutter Drummond (R).
Acisanthera variabilis (Mart.) Triana ♣**Fx** ▲ Alves RJV 5264 (R)
Cambessedesia espora A. St.-Hil. ex Bonpl. ssp. *illicifolia* (DC.) A. B. Martins ♣**Fx** ▲ Alves RJV 32 (R, RB, US)
Cambessedesia cf. *latevenosa* (DC.) Mart. ♣**Fx** ▲ Rutter RA 185 (R)
Cambessedesia tiradentensis Alves, Drummond & A. B. Martins ♣**Fx** ▲ Alves RJV 5837.1 (R)
Chaetostoma albiflorum (Naud.) Kosch. & A. B. Martins ♣**Fx** ▲ Alves RJV 101 (R)
Chaetostoma cupressinum (D. Don) Kosch. & A. B. Martins ♣**Fx** ▲ Alves RJV 220 (R, RB, US)
Clidemia sericea D. Don ♣**Fn** ▲ Alves RJV 5265 (R)
Comolia sertularia Triana ▲ ♣**Fx** Alves RJV 194 (R)
Lavoisiera bergii Cogn. ♣**Fn** ▲ Alves RJV 72 (R, RB)
Leandra adenothrix Cogn. ♣**Fn** ▲ Rutter RA et al 200 (R)
Leandra aurea (Cham.) Cogn. ♣**Fn** ▲ Alves RJV 11 (R, RB)
Leandra australis (Cham.) Cogn. ♣**Fx** ▲ Alves RJV 7377 (R)
Leandra cancellata Cogn. ♣**Fn** ▲ Rutter RA et al. 201.1 (R)

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Leandra coriacea Cogn. ♣**Fn** ▲ Rutter RA et al. 223 (R)
Leandra melastomoides Raddi ♣**Fn** ▲ Alves RJV 4363 (RB)
Leandra pennipilis Cogn. ♣**Fx** ▲ Alves RJV 5418 (R)
Leandra polychaeta Cogn. ♣**Fn** ▲ Rutter RA et al. 215 (R)
Leandra simplicicaulis Cogn. ▲ Duarte AP 3532 (RB)
Leandra warmingiana Cogn. ♣**Fn** ▲ Duarte AP 3518 (RB)
Macairea radula (Bonpl.) DC. ♣**Fn** ▲ Alves RJV 51 (R, RB, US)
Marcetia taxifolia (A. St.-Hil.) DC. ♣**Fx** ▲ Alves RJV 615.1 (R, RB, US)
Miconia albicans (Sw.) Triana ♣**Fn** ▲ Alves RJV 6318 (R)
Miconia brunnea (DC.) Naudin ♣**F** ▲ Alves RJV 7386 (R)
Miconia chamissois Naudin ♣**Fn** ▲ Alves RJV 5266 (R)
Miconia cinnamomifolia (DC.) Naudin ♣**F** ▲ Alves RJV 7371 (R)
Miconia cyathanthera Triana ♣**Fn** ▲ Alves RJV 813 (R, US)
Miconia ferruginata DC. ♣**F** ▲ Alves RJV 891 (R, US)
Miconia ibaguensis (Bonpl.) Triana ♣**F** ▲ Alves RJV 5554 (R)
Miconia cf. *inaequidens* Naudin ♣**F** ▲ Alves RJV 71 (R)
Miconia ligustroides (DC.) Naudin ♣**Fn** ▲ Alves RJV 156 (R)
Miconia pepericarpa DC. ♣**Fx** ▲ Alves RJV 468 (RB)
Miconia rubiginosa (Bonpl.) DC. ♣**Fn** ▲ Rutter RA 181 (R)
Miconia sellowiana Naud. ♣**F** ▲ Alves RJV 71 (RB)
Miconia stenostachya DC. ♣**Fn** ▲ Alves RJV 5551 (R)
Miconia theaezans (Bonpl.) Cogn. ssp. *flavescens* Cogn. ♣**Fn** ▲ Alves RJV 179 (R)
Microlicia avicularis (Naud.) Mart. ♣**Fx** ▲ Rutter RA 127 (R)
Microlicia decussata Naud. ♣**Fx** ▲ Alves RJV 43 (R, RB, US)
Microlicia euphorbioides Mart. ♣**Fx** ▲ Alves RJV 574 (R, US)
Microlicia fasciculata Mart. ♣**Fx** ▲ Alves RJV 107 (R, RB)
Microlicia fulva (Spreng.) Cham. ♣**Fx** ▲ Alves RJV 5256 (R)
Microlicia glandulifera Cogn. ♣**Fx** ▲ Alves RJV 5837.2 (R)
Microlicia isophylla DC. ♣**Fx** ▲ Alves RJV 622 (R, US)
Microlicia sp.1 ♣**Fx** ▲ Alves RJV 948 (R)
Microlicia sp.2 ♣**Fx** ▲ Alves RJV 58 (RB)
Ossaea amygdaloides (DC.) Triana ♣**Fn** ▲ Alves RJV 7375 (R)
Rhynchanthera cordata DC. ♣**Fx** ▲ Alves RJV 7371 (R)
Rhynchanthera grandiflora (Aubl.) DC. ♣**Fx** ▲ Alves RJV 5521 (R)
Siphanthera arenaria Cogn. ♣**T** ▲ Alves RJV 4717 (R, US, CAS)
Svitramia pulchra Cham. ♣**Fx** ▲ Alves RJV 451 (R)
Tibouchina candolleana (DC.) Cogn. ♣**F** ▲ Alves RJV 35 (RB)
Tibouchina estrellensis (Raddi) Cogn. ♣**Fn** ▲ Alves RJV 7407 (R)
Tibouchina fothergillae Cogn. ♣**F** ▲ Alves RJV 7221 (R)
Tibouchina frigidula (DC.) Cogn. ♣**Fn** ▲ Rutter RA 153 (R)
Tibouchina gracilis (Bonpl.) Cogn. ♣**Fx** ▲ Alves RJV 5523 (R)
Tibouchina aff. *herbacea* (DC.) Cogn. ♣**Fx** ▲ Alves RJV 4364 (R)
Tibouchina herbacea (DC.) Cogn. ♣**Fx** ▲ Alves RJV 5524 (R)
Tibouchina heteromalla (D. Don.) Cogn. ♣**Fx** ▲ Alves RJV 5536 (R)
Tibouchina hieracioides (DC.) Cogn. ♣**Fn** ▲ Alves RJV 887 (R, US)
Tibouchina martialis (Cham.) Cogn. ♣**Fn** ▲ Rutter RA 264 (R)
Tibouchina stenocarpa (DC.) Cogn. ♣**Fn** ▲ Rutter RA 190 (R)
Trembleya parviflora (D. Don) Cogn. ♣**Fx** ▲ Alves RJV 600 (R)
Trembleya phlogiformis DC. ♣**Fx** ▲ Alves RJV 4000 (RB)
Trembleya tridentata Naudin ♣**F** ▲ Alves RJV 595.1 (R, RB, US)

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Meliaceae
Cabralea cangerana Sald. ♣**F** ▲ Duarte AP 4266 (RB)
Cabralea sp. ♣**F** ▲ Alves RJV 5387 (R)
Guarea macrophylla Vahl subsp. *tuberculata* (Vell.) T. D. Penn. ♣**F** ▲ Alves RJV 613 (R)
Guarea tuberculata Vell. ♣**F** ▲ Peron MV 354 (RB)
Trichilia catigua A. Juss. ♣**F** ▲ Alves RJV 4766 (R)
Trichilia cf. *hirsuta* C. DC. ♣**F** ▲ Alves RJV 5417 (R)
Trichilia sp. ♣**F** ▲ Alves RJV 6328 (R)

Menispermaceae
Cissampelos andromorpha DC. ♣**Fx** ▲ Alves RJV 4351 (RB)
Cissampelos ovalifolia DC. ♣**Fx** ▲ Alves RJV 5902 (R)
Odontocarya sp. ♣**Fn** ▲ Alves RJV 4131 (RB)

Molluginaceae
Mollugo verticillata L. ♣**Fx** ▲ Alves RJV 765 (R)

Monimiaceae
Mollinedia selloi (Spreng.) A. DC. ♣**F** ▲ Alves RJV 6311 (R)
Siparuna sp. ♣**F** ▲ Duarte AP 8732 (RB)

Moraceae
Collaborators: Jorge Pereira Carauta (GUA, later R), Marcelo Dias Vianna Machado filho (R).
Dorstenia tubicina Ruíz & Pavón ♣**Fx** ▲ Alves RJV 7825 (R)
Ficus arpazusa Casar. ♣**F** ▲ Vianna Filho MDM 1699 (R)
Ficus enormis (Mart. ex Miq.) Mart. ♣**F** ▲ Vianna MC s.n. (GUA)
Ficus hirsuta Vell. ♣**F** ▲ Alves RJV 5300 (R)
Ficus mexiae Standl. ♣**F** ▲ Vianna Filho MDM 1700 (R)
Maclura tinctoria (L.) D. Don ex Steud. ♣**F** ▲ Alves RJV (R)
Sorocea bonplandii (Baill.) W. C. Burger, Lanj. & Wess. Boer ♣**F** ▲ Peron MV 351 (RB)
Sorocea sp. ♣**F** ▲ Palmeira M 351 (R)

Myrsinaceae
Myrsine coriacea (Sw.) R. Br. ex Roem. & Schult. ♣**F** ▲ Alves RJV 5613 (R)
Myrsine monticola Mart. ♣**F** ▲ Alves RJV 329 (R)
Myrsine umbellata Mart. ♣**F** ▲ Alves RJV 1320 (R)
Myrsine sp. ♣**F** ▲ Alves RJV 1546 (R)

Myrtaceae
Collaborators: †Graziela Maciel Barroso (RB), Marcos Valério Peron (RB).
Blepharocalyx salicifolius (Kunth) O. Berg ♣**Fx** ▲ Marquete R 3980 (RB)
Calyptranthes clusiifolia (Miq.) Berg ♣**Fx** ▲ Alves RJV 1321 (RB)
Campomanesia eugenioides (Camb.) Legr. var. *desertorum* (DC.) Landrum ♣**Fn** ▲ Alves RJV 1364 (R)
Campomanesia pubescens O. Berg ♣**Fn** ▲ Alves RJV 962 (R)
Campomanesia sp.1 ♣**Fn** ▲ Alves RJV 46 (RB)
Campomanesia sp.2 ♣**Fn** ▲ Alves RJV 5629 (R)
Eugenia aquea Burm. f. ♣**F** ▲ Alves RJV 892 (R)
Eugenia bimarginata DC. ♣**Fn** ▲ Alves RJV 323 (RB)
Eugenia langsdorffii O. Berg ♣**Fx** ▲ Alves RJV 614 (R)
Eugenia punicifolia (Kunth) DC. ♣**Fn** ▲ Barbosa M 2309 (RB)
Eugenia sp. ♣**Fx** ▲ Alves RJV 837 (R)

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Gomidezia affinis (Cambess.) D. Legrand ♣**Fn** ▲ Alves RJV 836 (R)
Gomidezia gaudichaudiana O. Berg ♣**Fx** ▲ Alves RJV 1043 (R)
Gomidezia sp. ♣**Fx** ▲ Alves RJV 4921 (R)
Myrcia eriocalyx DC. ♣**Fx** ▲ Alves RJV 1094 (R)
Myrcia aff. *eriocalyx* DC. ♣**Fx** ▲ Alves RJV 5419 (R)
Myrcia guianensis (Aubl.) DC. ♣**Fn** ▲ Alves RJV 49 (RB)
Myrcia multiflora (Lam.) DC. ♣**Fn** ▲ Peron MV 331 (RB)
Myrcia mutabilis (O. Berg) N. Silveira ♣**F** ▲ Alves RJV 1044 (R)
Myrcia pilodes Kiaersk. ♣**Fn** ▲ Farney C 2446 (RB)
Myrcia suaveolens Cambess. ♣**F** ▲ Alves RJV 124 (RB)
Myrcia sp. ♣**Fn** ▲ Alves RJV 472 (RB)
Myrciaria tenella (DC.) O. Berg ♣**F** ▲ Peron MV 328 (RB)
Myrciaria aff. *tenella* (DC.) O. Berg ♣**F** ▲ Alves RJV 6317 (R)
Psidium firmum Berg ♣**Fn** ▲ Peron MV 321 (RB)
Psidium incanescens Mart. ex DC. ♣**Fn** ▲ Peron MV 320 (RB)
Psidium sp. ♣**Fn** ▲ Alves RJV 5904 (R)
Syzygium jambos (L.) Alston ♣**F** ▲ Alves RJV 4368 (RB)

Nyctaginaceae
Collaborator: Cyl Farney Catarino de Sá (RB).
Guapira nitida (Mart.) Lundell ♣**F** ▲ Peron M 353 (R)
Guapira noxia (Netto) Lundell ♣**F** ▲ Alves RJV 1102 (R,R B)
Guapira opposita (Vell.) Reitz ♣**F** ▲ Alves RJV 1103 (R, RB)
Guapira aff. *opposita* (Vell.) Reitz ♣**F** ▲ Alves RJV 5334 (R)
Guapira sp. ♣**Fx** ▲ Alves RJV 4334 (R)

Ochnaceae
Collaborator: Claude Sastre (P).
Luxemburgia octandra A. St.-Hil. ♣**Fx** ▲ Duarte AP 3479 (RB)
Luxemburgia sp. ♣**Fx** ▲ Alves RJV 7566 (R)
Ouratea semiserrata (Mart. & Nees) Engl. ♣**Fn** ▲ Alves RJV 1056 (R)
Ouratea sp. ♣**Fn** ▲ Alves RJV 5978 (R)
Sauvagesia erecta A. St.-Hil. ♣**Fx** ▲ Alves RJV 5925 (R)
Sauvagesia glandulosa (A. St.-Hil.) Sastre ♣**Fx** ▲ Alves RJV 4022 (R)
Sauvagesia rubiginosa A. St.-Hil. ♣**Fx** ▲ Alves RJV 195 (RB)
Sauvagesia sp.1 ♣**Fx** ▲ Alves RJV 6221 (R)
Sauvagesia sp.2 ♣**Fx** ▲ Alves RJV 6273 (R)

Onagraceae
Fuchsia regia (Vell.) Munz ♣**Fx** ▲ Alves RJV 4341 (R, RB)
Ludwigia nervosa (Poir.) H. Hara ♣**Fn** ▲ Alves RJV 340 (RB)
Ludwigia sp. ♣**Fn** ▲ Vianna MC 116 (GUA)

Orchidaceae
Collaborators: Eduardo Leite Borba (BHCB), Fábio de Barros (SP), Leslie Garay (MO).
Acianthera johannensis (Barb. Rodr.) Pridgeon & M. W. Chase ♣**L** ▲ Alves RJV 200 (R)
Acianthera prolifera (Herb. ex Lindl.) Pridgeon & M. W. Chase ♣**L** ▲ Alves RJV s.n. (R)
Acianthera teres (Lindl.) Borba ♣**L** ▲ Alves RJV (RB)
Amblostoma tridactylum (Lindl.) Rchb. f. ♣**E** ▲ Alves RJV 5801 (R)
Bifrenaria aureofulva (Hook.) Lindl. ♣**L** ▲ Alves RJV s.n. (R)
Bifrenaria harrisoniae (Hook.) Rchb. f. ♣**L** ▲ Alves RJV 1131.6 (RB)

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Bifrenaria tyrianthina (Loudon) Rchb. f. ♣**L** ▲ Alves RJV * (R)
Brassavola cebolleta Rchb. ♣**L** ▲ Alves RJV * (R)
Bulbophyllum bidentatum (Barb. Rodr.) Cogn. ♣**L** ▲ Alves RJV 240 (R)
Bulbophyllum ipanemensis Hoehne ♣**L** ▲ Alves RJV 20 (R)
Bulbophyllum cf. *warmingianum* Cogn. ♣**E** ▲ Alves RJV * (R)
Bulbophyllum weddellii (Lindl.) Rchb. f. ♣**E** ▲ Alves RJV 407 (R)
Bulbophyllum sp. ♣**L** ▲ Alves RJV 241 (R)
Camaridium rigidum (Barb. Rodr.) Schltr. ♣**L** ▲ Alves RJV * (R)
Campylocentrum micranthum (Lindl.) Rolfe ♣**E** ▲ Costa A s.n. (R)
Campylocentrum organense (Rchb. f.) Rolfe ♣**E** ▲ Alves RJV 210 (RB)
Campylocentrum robustum Cogn. ♣**E** ▲ Alves RJV * (R)
Cattleya loddigesii Lindl. ♣**E** ▲ Alves RJV * (R)
Christensonella neowiedii (Rchb. f.) S. Koehler ♣**L** ▲ Alves RJV 314 (R)
Cleistes ionoglossa Hoehne ♣**G** ▲ Alves RJV 401 (R)
Cleistes metallina (B. Rodr.) Schlecht. ♣**G** ▲ Alves RJV 4905 (R)
Cleistes sp. (B. Rodr.) Schlecht. ♣**G** ▲ Alves RJV 4008 (R)
Cyclopogon argyrifolius Barb. Rodr. ♣**G** ▲ Alves RJV 406 (R, RB)
Cyclopogon bicolor (Ker.) Schltr. ♣**G** ▲ Alves RJV * (R)
Cyclopogon congestus (Vell.) Hoehne ♣**G** ▲ Alves RJV 5484 (R)
Cyclopogon longibracteatus (Barb. Rodr.) Schltr. ♣**G** ▲ Alves RJV * (R)
Cyclopogon sp. ♣**G** ▲ Alves RJV 5340 (R)
Cyrtopodium aff. *vernum* Rchb. f. & Warm. ♣**C** ▲ Alves RJV 4327.1 (R)
Cyrtopodium paranaense Schltr. ♣**L** ▲ Alves RJV 5339 (R)
Elleanthus brasiliensis Rchb. f. ♣**L** ▲ Alves RJV 237 (R)
Eltroplectris triloba (Lindl.) Pabst ♣**G** ▲ Alves RJV * (R)
Encyclia cf. *oncidioides* (Lindl.) Schltr. ♣**E** ▲ Alves RJV in vivo (R)
Epidendrum avicula Lindl. ♣**L** ▲ Alves RJV 223 (RB)
Epidendrum dendrobioides Thunb. ♣**C** ▲ Alves RJV * (R)
Epidendrum aff. *paniculatum* Ruiz & Pavon ♣**C** ▲ Alves RJV in vivo (R)
Epidendrum parahybuense Barb. Rodr. ♣**C** ▲ Alves RJV * (R)
Epidendrum rigidum Jacq. ♣**E** ▲ Alves RJV 214 (R)
Epidendrum secundum Jacq. ♣**C** ▲ Alves RJV 18 (RB)
Epidendrum setiferum Lindl. ♣**C** ▲ Alves RJV 65 (R)
Epidendrum cf. *versicolor* Hoehne ♣**C** ▲ Alves RJV 23 (R)
Epidendrum sp. ♣**C** ▲ Alves RJV 834 (R)
Epistephium speciosum Barb. Rodr. ♣**G** ▲ Alves RJV * (R)
Eurystyles cf. *actinosophila* (Barb. Rodr.) Schltr. ♣**E** ▲ Alves RJV (R)
Galeandra beyrichii Rchb. f. ♣**G** ▲ Alves RJV 404 (R)
Galeandra montana Barb. Rodr. ♣**G** ▲ Alves RJV * (R)
Govenia utriculata (Lindl.) Correll ♣**H** ▲ Alves RJV 4434 (RB)
Habenaria fastor Warm. ex Hoehne ♣**G** ▲ Alves RJV 1000 (R)
Habenaria gnoma Barb. Rodr. ♣**G** ▲ Alves RJV 22 (R)
Habenaria leptoceras Hook. ♣**G** ▲ Alves RJV 305.2 (RB)
Habenaria cf. *montevidensis* Spreng. ♣**G** ▲ Alves RJV 5813 (R)
Habenaria petalodes Lindl. ♣**G** ▲ Alves RJV 209 (R)
Habenaria repens Nutt. ♣**G** ▲ Alves RJV 221 (RB)
Habenaria strictissima Rchb. f. var. *odontopetala* (Rchb. f.) L. O. Williams ♣**G** ▲ Alves RJV 4255 (R)
Habenaria sp. ♣**G** ▲ Alves RJV 4865 (R)
Hadrolaelia brevipedunculata (Cogn.) Chiron & V. P. Castro ♣**L** ▲ Alves RJV * (R)
Isabelia virginalis Barb. Rodr. ♣**E** ▲ Alves RJV s.n. (R)
Isochilus linearis (Jacq.) R. Br. ♣**E** ▲ Alves RJV * (R)

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Koellensteinia tricolor (Lindl.) Rchb. f. ♣**G** ▲ Alves RJV 4904 (R)
Liparis beckeri Alves ♣**H** ▲ Alves RJV * (R)
Liparis nervosa (Thunb.) Lindl. ♣**H** ▲ Alves RJV * (R)
Maxillaria cerifera Barb. Rodr. ♣**E** ▲ Alves RJV 215 (R)
Maxillaria chrysantha Barb. Rodr. var. *typica* Hoehne ♣**L** ▲ Alves RJV 13 (R)
Maxillaria minuta Cogn. ♣**L** ▲ Alves RJV 249 (R)
Maxillaria murilliana Hoehne ♣**L** ▲ Alves RJV 213 (R, RB)
Maxillaria sp. ♣**L** ▲ Alves RJV 242 (R)
Mesadenella meeae Alves ♣**G** ▲ Alves RJV 690 (RB)
Octomeria alpina Barb. Rodr. ♣**L** ▲ Alves RJV 392 (R)
Octomeria crassifolia Lindl. ♣**E** ▲ Alves RJV 393 (R)
Octomeria geraensis Barb. Rodr. ♣**E** ▲ Alves RJV 21 (R)
Octomeria sp. ♣**E** ▲ Alves RJV 244 (R)
Oeceoclades maculata (Lindl.) Lindl. ♣**C** ▲ Alves RJV 283 (R, RB)
Oncidium blanchetii Rchb. f. ♣**G** ▲ Alves RJV s.n. (R)
Oncidium curtum Lindl. ♣**E** ▲ Alves RJV 5802 (R)
Oncidium pumilum Lindl. ♣**E** ▲ Alves RJV 402 (RB)
Pabstia sp. ♣**L** ▲ Alves RJV 243 (R)
Pachygenium phallocalosum (Alves) Szlach., R. González & Rutk. ♣**G** ▲ Alves RJV 391 (RB)
Pelexia longibracteata Pabst ♣**G** ▲ Alves RJV * (R)
Pleurothallis aveniformis Hoehne ♣**L** ▲ Alves RJV s.n. (R)
Pleurothallis bleyensis Pabst ♣**E** ▲ Alves RJV 999 (R)
Pleurothallis sp. ♣**E** ▲ Alves RJV 245 (R)
Polystachya concreta (Jacq.) Garay & Sw. ♣**E** ▲ Alves RJV 212 (R)
Polystachya estrellensis Rchb. f. ♣**E** ▲ Alves RJV 211 (R)
Prescottia micrantha Lindl. ♣**E** ▲ Alves RJV * (R)
Prescottia microrhiza B. Rodr. ♣**G** ▲ Alves RJV 5362 (R)
Prescottia oligantha (Sw.) Lindl. ♣**E** ▲ Alves RJV * (R)
Prescottia phleoides Lindl. ♣**G** ▲ Alves RJV * (R)
Promenaea ovatiloba (Klinge) Cogn. ♣**L** ▲ Alves RJV * (RB)
Prosthechea papilio (Vell.) W. E. Higgins ♣**E** ▲ Alves RJV * (R)
Prosthechea vespa (Vell.) W. E. Higgins ♣**L** ▲ Alves RJV 224 (R)
Prosthechea sp. ♣**L** ▲ Alves RJV * (R)
Sacoila lanceolata (Aubl.) Garay ♣**G** ▲ Alves RJV 64 (RB)
Sarcoglottis cogniauxiana (Barb. Rodr. ex Cogn.) Schltr. ♣**G** ▲ Alves RJV 939 (R)
Sarcoglottis fasciculata Hoehne ♣**G** ▲ Alves RJV 1689 (R)
Sarcoglottis simplex (Griseb.) Schltr. ♣**G** ▲ Alves RJV 959 (RB)
Scaphyglottis modesta (Rchb. f.) Schltr. ♣**E** ▲ Alves RJV s.n. (R)
Skeptrostachys congestiflora (Cogn.) Garay ♣**G** ▲ Alves RJV * (R)
Sophronitella violacea (Lindl.) Schltr. ♣**L** ▲ Alves RJV s.n. * (R, RB)
Sophronitis caulescens (Lindl.) C. Berg & M. W. Chase ♣**L** ▲ Alves RJV 1 (R, RB)
Sophronitis aff. *caulescens* (Lindl.) C. Berg & M. W. Chase ♣**L** ▲ Alves RJV s.n. (R)
Stanhopea cf. *graveolens* Lindl. ♣**L** ▲ Alves RJV 250 (R)
Stelis puberula Barb. Rodr. ♣**L** ▲ Alves RJV 222 (R, RB)
Xylobium cf. *foveatum* (Lindl.) G. Nicholson ♣**L** ▲ Alves RJV s.n. (R)
Zygopetalum graminifolium Rolfe ♣**H** ▲ Alves RJV 4349 (R)
Zygopetalum intermedium Lodd. ♣**H** ▲ Alves RJV * (R)
Zygopetalum mackayi Hook. ♣**H** ▲ Alves RJV 290 (R)
Zygopetalum triste Barb. Rodr. ♣**H** ▲ Alves RJV * (R)

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Oxalidaceae
Collaborator: † Melle Alicia Lourteig (P)
Oxalis corniculata L. ♣**T** ▲ Alves RJV 956 (R)
Oxalis cytisoides Zucc. ♣**T** ▲ Duarte AP 3549 (RB)

Passifloraceae
Passiflora aff. *capsularis* L. ♣**C** ▲ Alves RJV 4254 (R)
Passiflora capsularis L. ♣**C** ▲ Alves RJV 5414 (R)
Passiflora edulis Sims ♣**C** ▲ Alves RJV 490 (RB)
Passiflora miersii Mast. ♣**C** ▲ Alves RJV 1314 (RB)
Passiflora aff. *misera* Kunth ♣**C** ▲ Alves RJV 4339 (R)
Passiflora organensis Gardner ♣**C** ▲ Alves RJV 493 (R)
Phyllanthaceae
Phyllanthus niruri L. ssp. *lathyroides* (Kunth) G. L. Webster ♣**Fx** ▲ Alves RJV 741 (R)
Phyllanthus sp. ♣**Fx** ▲ Alves RJV 6070 (R)

Phytolaccaceae
Microtea paniculata Moq. ♣**T** ▲ Duarte AP 3502 (RB)
Phytollaca thyrsiflora Fenzl ex J. A. Schmidt ♣**T** ▲ Alves RJV 994 (R)

Piperaceae
Collaborator: Elsie Franklin Guimarães (RB).
Ottonia anisum Sprengel ♣**C** ▲ Alves RJV 845 (R, RB)
Peperomia corcovadensis Gardner ♣**L** ▲ Marquete R 3997 (RB)
Peperomia decora Dahlst. ♣**E** ▲ Alves RJV 321 (RB)
Peperomia galioides Kunth ♣**L** ▲ Alves RJV 824 (RB)
Peperomia subrubrispica C. DC. ♣**E** ▲ Alves RJV 186 (R)
Peperomia tetraphylla (G. Forst.) Hook. & Arn. ♣**E** ▲ Alves RJV 1367 (R)
Peperomia urocarpa Fisch. & C. A. Mey. ♣**L** ▲ Alves RJV 4427 (RB)
Peperomia sp.1 ♣**L** ▲ Alves RJV 4785 (R)
Peperomia sp.2 ♣**L** ▲ Alves RJV s.n. (R)
Peperomia sp.3 ♣**L** ▲ Alves RJV s.n. (RB)
Piper aduncum L. ♣**Fn** ▲ Alves RJV 287 (RB)
Piper amalago L. var. *medium* (Jacq.) Junck. ♣**Fn** ▲ Alves RJV 4310.2 (R)
Piper anisatum Kunth ♣**Fn** ▲ Peron MV 350 (RB)
Piper arboreum Aubl. ♣**F** ▲ Marquete R 3933 (RB)

Plantaginaceae
Collaborator: Knud Rahn (C).
Plantago australis Lam. ssp. *hirtella* (Kunth) Rahn ♣**H** ▲ Alves RJV 830 (R)

Poaceae
Collaborators: Emmet J. Judziewicz (UWSP), Hilda Maria Longhi Wagner (ICN), Lynn Clark (ISU), Tatiana Sendulsky (SP).
Andropogon leucostachyus Kunth ♣**H** ▲ Alves RJV 1003 (R)
Andropogon macrothrix Trin. ♣**H** ▲ Alves RJV 628 (R)
Andropogon selloanus (Hack.) Hack. ♣**H** ▲ Alves RJV s.n. (R)
Andropogon virgatus Desv. ♣**H** ▲ Alves RJV s.n. (R)
Andropogon sp. ♣**H** ▲ Alves RJV s.n. (R)
Aristida capillacea Lam. ♣**H** ▲ Alves RJV 1084 (R)
Aristida ekmaniana Henrard ♣**H** ▲ Wagner HML 7013 (R)

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Aristida jubata (Arechav.) Herter ♣**H** ▲ Wagner HML 7007 (R)
Aristida recurvata Kunth ♣**H** ▲ Wagner HML 7009 (R)
Aristida sanctae-luciae Trin. ♣**H** ▲ Moura R 160 (R)
Aristida torta (Nees) Kunth ♣**H** ▲ Wagner HML 7008 (R)
Arundinella aff. *hispida* (Willd.) Kuntze ♣**H** ▲ Alves RJV 1088 (R)
Arundinella hispida (Willd.) Kuntze ♣**H** ▲ Wagner HML 7069 (R)
Aulonemia effusa (Hack.) McClure ♣**L** ▲ Alves RJV 6170 (R)
Axonopus brasiliensis (Spreng.) Kuhlm. ♣**H** ▲ Alves RJV 853 (R)
Briza calotheca (Trin.) Hack ♣**H** ▲ Moura R 158 (R)
Chusquea pinifolia (Nees) Nees ♣**H** ▲ Alves RJV 4719 (R)
Ctenium chapadense (Trin.) Doell. ♣**H** ▲ Moura R 159 (R)
Danthonia montana Doell. ♣**H** ▲ Wagner HML 7006 (R)
Echinolaena inflexa (Poir.) Chase ♣**H** ▲ Alves RJV 4831 (R)
Eragrostis articulata (Schrank) Nees ♣**H** ▲ Wagner HML 7003 (R)
Eragrostis rufescens Schrad. ex Schult. ♣**H** ▲ Wagner HML 7063 (R)
Gymnopogon foliosus (Willd.) Nees ♣**H** ▲ Alves RJV 1013 (R)
Leptocoryphium lanatum (Kunth) Nees ♣**H** ▲ Wagner HML 7017 (R)
Loudetiopsis chrysothrix (Nees) Conert ♣**H** ▲ Alves RJV 1303 (R)
Melinis minutiflora P. Beauv. ♣**H** ▲ Alves RJV 589 (R)
Merostachys sp. ♣**H** ▲ Alves RJV 6126 (R)
Olyra sp. ♣**H** ▲ Alves RJV 5655 (R)
Panicum euprepes Renv. ♣**H** ▲ Alves RJV 1086 (R)
Panicum aff. *grandifolium* Doell. ♣**H** ▲ Alves RJV 821 (R)
Panicum trinii Kunth ♣**H** ▲ Alves RJV 4338 (R)
Panicum sp. ♣**H** ▲ Alves RJV 5644 (R)
Paspalum aff. *erianthum* Nees ex Trin. ♣**H** ▲ Wagner HML 7024 (R)
Paspalum hyalinum Nees ex Trin. ♣**H** ▲ Alves RJV 4881 (R)
Paspalum aff. *mandiocanum* Trin. ♣**H** ▲ Wagner HML 7068 (R)
Paspalum polyphyllum Nees ♣**H** ▲ Wagner HML 7001 (R)
Paspalum sp. ♣**H** ▲ Wagner HML 7000 (R)
Schyzachyrium cf. *imberbe* (Mack.) A. Camus ♣**H** ▲ Alves RJV 1092 (R)
Schizachyrium tenerum Nees ♣**H** ▲ Alves RJV 1009 (R)
Steinchisma decipiens (Nees ex Trin.) W. V. Br. ♣**H** ▲ Alves RJV 1072 (R)
Trachypogon vestitus Andersson ♣**H** ▲ Alves RJV 6014.1 (R)

Polygalaceae
Collaborator: Maria do Carmo Mendes Marques (RB).
Bredemeyera sp. ♣**Fn** ▲ Alves RJV 6968 (R)
Monnina richardiana A. W. Benn. ♣**Fn** ▲ Tameirão Neto E 608 (RB)
Polygala bryoides A. St.-Hil. ♣**C** ▲ Duarte AP 3509 (RB)
Polygala galioides Poir. ♣**C** ▲ Alves RJV 167 (RB)
Polygala glochidiata Kunth ♣**C** ▲ Martinelli G 4782 (RB)
Polygala lancifolia A. St.-Hil. ♣**C** ▲ Alves RJV 6347 (R)
Polygala paniculata L. ♣**C** ▲ Alves RJV 295 (RB)
Polygala pseudoerica A. St.-Hil. & Moq. ♣**Fx** ▲ Alves RJV 1052 (R)
Polygala warmingiana A. W. Benn ♣**Fx** ▲ Alves RJV 6342 (R)
Polygala sp. ♣**H** ▲ Alves RJV 917 (R)
Securidaca sp. ♣**C** ▲ Alves RJV 983 (R)

Polygonaceae
Polygonum sp. ♣**T** ▲ Alves RJV 4435 (RB)

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Portulacaceae
Portulaca mucronata Link ♣**C** ▲ Alves RJV 382 (R)

Proteaceae
Roupala montana Aubl. ♣**Fn** ▲ Alves RJV 927 (R)

Rosaceae
Prunus myrtifolia (L.) Urb. ♣**Fn** ▲ Martinelli G 4787 (RB)
Prunus sphaerocarpa Sw. ♣**Fn** ▲ Alves RJV 5816 (R)
Prunus sp. ♣**Fn** ▲ Peron MV 304 (RB)
Rubus brasiliensis Mart. ♣**Fn** ▲ Alves RJV 1684 (R)
Rubus rosaefolius Smith ♣**Fn** ▲ Alves RJV 384 (R)

Rubiaceae
Collaborators: Cristina Bestetti Costa (SP), Mario Gomes (RB).
Alibertia concolor (Cham.) K. Schum. ♣**Fx** ▲ Alves RJV 324 (RB)
Amaioua edulis (A. Rich.) Baill. ♣**Fx** ▲ Alves RJV 204 (R)
Amaioua intermedia (A. Rich.) Steyerm. ♣**Fx** ▲ Duarte AP 5197 (RB)
Arcitophyllum sp. ♣**C** ▲ Alves RJV 6719 (R)
Chiococca alba Hitch. ♣**Fx** ▲ Alves RJV 4369 (RB)
Chiococca densifolia DC. ♣**Fx** ▲ Alves RJV 207 (RB)
Coccocypselum lanceolatum (Ruiz & Pavon) Pers. ♣**C** ▲ Alves RJV 153 (R)
Declieuxia aspalathoides Muell. Arg. ♣**Fx** ▲ Alves RJV 4236.1 (RB)
Declieuxia cacuminis Müll. Arg. var. *cacuminis* ♣**Fx** ▲ Alves RJV 4347 (R, RB)
Declieuxia coerulea Gardner ♣**Fx** ▲ Alves RJV 5845 (R)
Declieuxia cordigera Mart. ex Schult. & Schult. f. ♣**Fx** ▲ Alves RJV 793 (RB)
Declieuxia fruticosa (DC.) Standl. ♣**Fx** ▲ Alves RJV 4327 (R, RB)
Declieuxia sp. ♣**Fx** ▲ Alves RJV 793 (R)
Diodia apiculata (Willd. ex Roem. & Schult.) K. Schum. ♣**Fx** ▲ Alves RJV 803 (RB)
Faramea latifolia (Cham. & Schltdl.) DC. ♣**Fn** ▲ Alves RJV 810 (RB)
Faramea multiflora A. Rich. ex DC. var. *salicifolia* (C. Presl) Steyerm. ♣**Fn** ▲ Alves RJV 204 (RB)
Faramea warmingiana M. Arg. ♣**Fn** ▲ Alves RJV 5920 (R)
Faramea sp. ♣**Fx** ▲ Alves RJV 188 (R)
Galianthe brasiliensis (Spreng.) E. L. Cabral & Bacigalupo ♣**Fn** ▲ Alves RJV 205 (RB)
Galium sp. ♣**C** ▲ Alves RJV 4442 (RB)
Guettarda uruguensis Cham. & Schltdl. ♣**Fn** ▲ Alves RJV (RB)
Hillia parasitica (Vell.) Steyerm. ♣**Fn** ▲ Alves RJV (RB)
Manettia ignita K. Schum. ♣**C** ▲ Alves RJV 285.1 (R)
Manettia luteorubra Benth. ♣**C** ▲ Alves RJV 8 (R)
Palicourea rigida Kunth ♣**Fx** ▲ Alves RJV 331 (R)
Posoqueria macropus Mart. ♣**F** ▲ Alves RJV 5298 (R)
Psychotria appendiculata Müll. Arg. ♣**Fx** ▲ Marquete R 3994 (RB)
Psychotria stachyoides Benth. ♣**Fx** ▲ Duarte AP 3491 (RB)
Psychotria vellosiana Benth. ♣**Fx** ▲ Alves RJV 851 (RB)
Remijia sp. ♣**Fn** ▲ Barbosa M 2318 (RB)
Rudgea viburnoides (Cham.) Benth. ♣**Fn** ▲ Alves RJV 890 (RB)
Sabicea brasiliensis Wernh. ♣**Fn** ▲ Alves RJV 563 (R)
Spermacoce brachystemonoides Cham. & Schltdl. ♣**C** ▲ Alves RJV 338 (RB)
Spermacoce capitata Ruiz & Pav. ♣**C** ▲ Mello-Barreto HL 5090 (RB)
Spermacoce verticillata (L.) Mey. ♣**C** ▲ Alves RJV 803 (R, RB)
Tocoyena formosa (Cham. & Schltdl.) K. Schum. ♣**Fx** ▲ Alves RJV 916 (R)

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Santalaceae
Thesium sp. ♣**H** ▲ Alves RJV 882 (R)

Sapindaceae
Cupania vernalis Cambess. ♣**F** ▲ Alves RJV 1061 (R)
Paullinia sp. ♣**F** ▲ Alves RJV 4981 (R)
Sapindus saponaria L. ♣**F** ▲ Barbosa M 2366 (RB)
Serjania erecta Radlk. ♣**F** ▲ Rutter RA 143 (R)

Scrophulariaceae
Collaborators: Regina Braga de Moura (R), Ricardo Ribeiro Rodrigues (ESA).
Buchnera lavandulacea Cham. & Schltdl. ♣**C** ▲ Alves RJV 1339 (R)
Buchnera rosea Kunth ♣**Fx** ▲ Alves RJV (R)
Conobea scoparioides (Cham. & Schltdl.) Benth. ♣**Fx** ▲ Alves RJV 1143 (R)
Esterhazya campestris Spix & Mart. ♣**Fn** ▲ Alves RJV 930 (R)
Esterhazya splendida Mikan ♣**Fx** ▲ Alves RJV 357 (R)
Melasma sp. ♣**Fx** ▲ Alves RJV 4371 (R)
Stemodia verticillata (Mill.) Hassl. ♣**Fx** ▲ Alves RJV 1145 (R)

Simaroubaceae
Simarouba sp. ♣**F** ▲ Alves RJV 792 (R)

Smilacaceae
Collaborator: Regina Helena Pott Andreata (RUSU).
Smilax brasiliensis Spreng. ♣**Fx** ▲ Alves RJV (R)
Smilax coriifolia A. DC. ♣**Fx** ▲ Palmeira M 337 (R)
Smilax elastica Griseb. ♣**Fx** ▲ Alves RJV 450 (R)
Smilax seringoides Griseb. ♣**Fx** ▲ Alves RJV 340.1 (R)

Solanaceae
Collaborators: Lucia d'Avila Freire de Carvalho (RB), Rita de Cássia Almeida Lafetá (CESJ).
Dyssochroma viridiflora Miers ♣**F** ▲ Alves RJV 5392 (R)
Nicotiana langsdorffii Weinm. ♣**C** ▲ Duarte AP 3496 (RB)
Solanum americanum Mill. ♣**Fn** ▲ Alves RJV 5313 (R)
Solanum biceps Desv. ♣**Fn** ▲ Alves RJV 862 (R)
Solanum cernuum Vell. ♣**F** ▲ Alves RJV 5518 (R)
Solanum granuloso-leprosum Dun. ♣**F** ▲ Alves RJV 5638 (R)
Solanum lycocarpum A. St.-Hil. ♣**F** ▲ Alves RJV 67 (R, RB)
Solanum refractifolium Sendtn. ♣**F** ▲ Alves RJV 5517 (R)
Solanum scuticum M. Nee ♣**F** ▲ Tameirão Neto E 7 (RB)
Solanum sisymbriifolium Lam. ♣**F** ▲ Alves RJV 4370 (RB)
Solanum subumbelatum Vell. ♣**F** ▲ Carvalho AF 217 (RB)
Solanum viarum Dun. ♣**C** ▲ Alves RJV 5639 (R)
Solanum sp. ♣**C** ▲ Alves RJV 4370 (R)

Sterculiaceae
Melochia sp. ♣**F** ▲ Duarte AP 5119 (RB)
Waltheria communis (A. St.-Hil.) K. Schum. in Mart. ♣**Fn** ▲ Alves RJV 127 (RB)
Waltheria sp. ♣**Fn** ▲ Alves RJV 127 (R)

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Styracaceae
Styrax aff. *ferrugens* Nees & Mart. ♣**F** ▲ Alves RJV 869 (R)
Styrax latifolius (A. DC.) Perkins ♣**F** ▲ Duarte AP 3492 (RB)
Styrax sp. ♣**Fx** ▲ Alves RJV 5636 (R)

Theaceae
Collaborator: Marco Antônio Palomares Accardo (R).
Gordonia tomentosa (Mart. & Zucc.) Spreng. ♣**F** ▲ Alves RJV 7229 (R)
Ternstroemia sp. ♣**F** ▲ Alves RJV 5980 (R)

Tiliaceae
Luehea rufescens A. St.-Hil. ♣**F** ▲ Alves RJV 5405 (R)
Triumfetta cf. *bartramii* L. ♣**F** ▲ Alves RJV 4755 (R)
Triumfetta rhomboidea Jacq. ♣**F** ▲ Alves RJV 4019 (R)

Turneraceae
Turnera cf. *tenuicaulis* Urb. ♣**Fx** ▲ Alves RJV s.n. (R)
Turnera oblongifolia Cambess. ♣**Fx** ▲ Alves RJV 4001 (R, RB)
Turnera sp. ♣**Fx** ▲ Alves RJV 884 (R)

Ulmaceae
Celtis glycycarpa Mart. ex Miq. ♣**F** ▲ Alves RJV 6222 (R)
Celtis sp. ♣**F** ▲ Alves RJV 6219 (R)

Urticaceae
Parietaria officinalis L. ♣**C** ▲ Alves RJV 1146 (R)
Urera baccifera (L.) Gaudich. ♣**F** ▲ Alves RJV 4302 (RB)

Velloziaceae
Collaborators: Nanuza Luiza de Menezes (SPF), Renato de Mello Silva (SPF).
Aylthonia tomentosa (Mart.) N. L. Menezes ♣**L** ▲ Alves RJV 10 (R, SPF)
Aylthonia sp. ♣**L** ▲ Alves RJV 5830.1 (R)
Vellozia crassicaulis Mart. ex Schult. f. ♣**L** ▲ Alves RJV 334.1 (R)
Vellozia crinita Goeth. & Henr. ♣**Fx** ▲ Alves RJV 191 (R)
Vellozia kolbekii Alves ♣**F** ▲ Alves RJV 852 (R)
Vellozia sp. ♣**L** ▲ Alves RJV s.n. (RB)

Verbenaceae
Collaborator: Sandra Atkins (K).
Aegiphila lhotskiana Cham. ♣**Fn** ▲ Duarte AP 3515 (RB)
Aloysia virgata (Ruiz & Pavon) Pers. ♣**F** ▲ Alves RJV 5318 (R)
Lantana camara L. ♣**F** ▲ Alves RJV 632 (R)
Lantana fucata Lindl. ♣**Fn** ▲ Alves RJV 4973 (R)
Lantana sp. ♣**Fn** ▲ Alves RJV 5319 (R)
Lippia alba (Mill.) N. E. Br. ♣**Fx** ▲ Alves RJV 481 (R)
Lippia elegans Cham. ♣**Fx** ▲ Duarte AP 3500 (RB)
Lippia lupulina Cham. ♣**Fx** ▲ Alves RJV 795 (R)
Lippia rotundifolia Cham. ♣**Fx** ▲ Alves RJV 380 (R)
Lippia cf. *thymoides* Mart. & Schauer ♣**Fx** ▲ Alves RJV 632.1 (R)
Petraea cf. *martiana* Schauer ♣**F** ▲ Alves RJV 5389 (R)
Petraea sp. ♣**F** ▲ Alves RJV 1311 (R)

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Stachytarpheta aff. *ajugaefolia* Schauer ♣**Fx** ▲ Alves RJV 4025 (R)
Stachytarpheta reticulata Mart. ♣**Fx** ▲ Alves RJV 4825 (R)
Stachytarpheta sellowiana Schau. ♣**Fx** ▲ Alves RJV 355 (R)
Vitex polygama Chamisso ♣**F** ▲ Alves RJV 1069 (R)
Vitex sp. ♣**Fx** ▲ Alves RJV 6271 (R)

Viscaceae
Collaborators: Carlos Henrique Reif de Paula (RUSU), Job Kuijt (UVIC).
Phoradendron affine (Pohl) Nutt. ♣**E** ▲ Carrijo T 8 (RB)
Phoradendron crassifolium Eichl. ♣**E** ▲ Alves RJV 1319 (RB)
Phoradendron dichotomum Ettingsh. ♣**E** ▲ Alves RJV 4769 (R)
Phoradendron dipterum Eichler ♣**E** ▲ Reif CH de P s.n. (RUSU)
Phoradendron piperoides (Kunth) Trel. ♣**E** ▲ Reif CH de P s.n. (RUSU)
Phoradendron undulatum (Pohl ex DC.) Eichler ♣**E** ▲ Reif CH de P s.n. (RUSU)

Vitaceae
Cissus duarteana Camb. ♣**G** ▲ Alves RJV 6338 (R)
Cissus erosa Rich. ♣**G** ▲ Alves RJV 4324 (R, RB)

Vochysiaceae
Collaborators: Kikyo Yamamoto (UEC), Maria Célia Vianna (GUA).
Qualea dichotoma (Mart.) Warm. ♣**F** ▲ Vianna MC 2360 (GUA)
Qualea sp.1 ♣**F** ▲ Alves RJV 4348 (R)
Qualea sp.2 ♣**F** ▲ Vianna MC 2376 (GUA)
Salvertia convallariodora A. St.-Hil. ♣**Fx** ▲ Alves RJV 1014 (R)
Vochysia emarginata Vahl ♣**F** ▲ Alves RJV 359 (R)
Vochysia thyrsoidea Pohl ♣**F** ▲ Alves RJV 856 (R)

Xyridaceae
Xyris anceps Lam. ♣**C** ▲ Alves RJV 364 (R)
Xyris aff. *anceps* Lam. ♣**C** ▲ Alves RJV 5840 (R)
Xyris asperula Mart. ♣**C** ▲ Alves RJV 196 (R)
Xyris bahiana Malme ♣**C** ▲ Alves RJV 366 (R)
Xyris blepharophylla Mart. ♣**C** ▲ Alves RJV 367 (R)
Xyris caroliniana Walt. var. *caroliniana* ♣**C** ▲ Alves RJV 304 (R)
Xyris hymenachne Mart. ♣**C** ▲ Alves RJV 349 (R)
Xyris cf. *rupicola* Kunth ♣**C** ▲ Alves RJV 1300 (R)
Xyris spectabilis Mart. ♣**C** ▲ Alves RJV 1064 (R)
Xyris tenella Kunth ♣**C** ▲ Alves RJV 270 (R)
Xyris sp. ♣**C** ▲ Alves RJV 4896 (R)